ERIC Document Resume | See Instruction Sheet | DATE OF RESUME 6/1/65 | DATE RECEIVED

A. IDENTIFICATION DATA

1. ERIC ACCESSION NO. [illegible]78

2. ORIGINATOR CONTROL NO(S). 8079

3. IDENTIFICATION NO. CR 557

DO NOT WRITE IN SPACE BELOW

4. AUTHOR(S): Cook, Walter W.

5. TITLE OF DOCUMENT ABSTRACTED: A Study of Job Motivations, Activities, and Satisfactions of Present and Prospective Women College Faculty Members: Partial Report

6. PUBLICATION TITLE: N.A.

7. EDITOR(S): N.A.

8. PLACE OF ORIGIN
ORG. Univ. of Minn.
ST. Minneapolis,
CITY, STATE Minn.
TELE. EXT.
INST/LOC CODE

9. PUBLISHER OR SOURCE: University of Minnesota

10. VOL.	11. PAGES	12. MO./YR.	13. TOTAL PP.
N.A.	N.A.	60	100

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TYPE OF REPORT
PROPOSAL ☐
IN-PROGRESS ☐
FINAL ☒
FOLLOW-UP ☐

OTHER ERIC REFERENCES:

ERIC SATELLITE CODE

B. INDEXING DATA

14. SUBJECT AREA

15. TYPE OF ENDEAVOR: Experimental study

16. INDEXING TERMS (6-12)

		teacher edu.	backgrounds	progress
cooperative research	careers	undergrad. edu.	attitudes	reports
teachers	recruitment	graduate edu.	students	
sex factors	enrollment	responsibility	motivation	

17. ABSTRACT (MAX. 250 WORDS)

This study, undertaken as an Office of Education Cooperative Research Project, had these major aims: (1) to provide information regarding the academic positions women hold in college, the possibility of their becoming a proportionately larger source of supply in the future, and the relation of supply to current college and graduate school enrollments; (2) to find out why present women faculty members selected this field, how they prepared for it, what their present job responsibilities are, and what satisfactions they seek and obtain from their work; and (3) to explore attitudes of women students toward service on college faculties. Because of the illness of the chief investigator, Dr. Ruth Eckert, and the impossibility of locating a substitute investigator, the study could not be completed within the contract dates and the study was subsequently discontinued. The work done was confined to completion of the preliminary phases of the investigation and this report covers progress made within those areas.

Included in this report are: (1) an extensive review of pertinent literature, (2) a summary of the goals, procedure, and limitations of the preliminary interviews with women faculty members, scheduled for the fall of 1959, and (3) a progress report of some initial work undertaken in relation to the followup of persons holding the Ph. D. degree. Also includes brief summaries of three doctoral theses underway at the University of Minnesota which are related to the initially planned project.

ERIC No.

18. SOURCE OF ABSTRACT: Reporter No. 6

C. FUNDING DATA

19. SUPPORTING ORGANIZATION: Office of Education

20. DIVISION OR DEPT.

21. CONTRACT NO.

PROJECT NO.

22. TOTAL COST OF PROJECT

23. DURATION OF PROJECT

U.S. Department of Health, Education, and Welfare
Office of Education

A STUDY OF JOB, MOTIVATIONS, ACTIVITIES, AND SATISFACTIONS OF PRESENT AND PROSPECTIVE WOMEN COLLEGE FACULTY MEMBERS

COOPERATIVE RESEARCH PROJECT #557

DR. RUTH E. ECKERT

U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
Office of Education

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ED000278

UNIVERSITY OF MINNESOTA

14

PROJECT NO. 557

A Study of Job Motivations, Activities, and Satisfactions of Present and Prospective Women College Faculty Members

PARTIAL REPORT

Submitted by Walter W. Cook, Dean
College of Education
University of Minnesota

The research reported herein was performed pursuant to a contract with the United States Office of Education, Department of Health, Education, and Welfare

May 31, 1960

PROJECT 557

A Study of Job Motivations, Activities, and Satisfactions of Present and Prospective Women Faculty Members

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The research reported herein was performed pursuant
to a contract with the United States Office of Education,
Department of Health, Education, and Welfare

UNIVERSITY OF MINNESOTA

College of Education

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Office of the Dean

May 31, 1960

Dr. Roy M. Hall
Assistant Commissioner for Research
United States Office of Education
Health, Education, and Welfare
Washington 25, D. C.

Dear Dr. Hall:

With this letter, I am submitting the final report on progress made in the initial stages of Project 557 (OE contract No. SAE 8201), "A Study of Job Motivations, Activities, and Satisfactions of Present and Prospective Women Faculty Members." We have formally requested cancellation of this project. We regret that the chief investigator, Dr. Ruth Eckert, became ill at a critical stage in the early work on the project, and we could not find another competent investigator with sufficient time free at that juncture to become her substitute.

In writing the report, we have tried to present the material as usefully as possible. Because of Dr. Eckert's temporary absence from our campus, she could take no part in preparing the report. Any release of the material, in fairness to her, should make it clear that she is not responsible for the report itself, even though we are indebted to her for the leadership and initial production under the grant. Various sections of the report indicate the persons preparing those sections.

May I express once more our appreciation for the support received from your office for research in the important areas included under Project 557, an interest which we trust will carry forward to future related proposals.

Sincerely yours,

Walter W. Cook

Walter W. Cook
Dean

REPORT TO THE COMMISSIONER OF EDUCATION, U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, SUBMITTED BY:

College of Education, University of Minnesota on May 31, 1960

Transmitted by: Walter W. Cook, Dean, College of Education,
University of Minnesota

Project No. 557; OE Contract Number SAE-8201
Project Title: A Study of Job Motivations, Activities, and Satisfactions of Present and Prospective Women College Faculty Members

Final Report Submitted With Request For Cancellation

The projected study of Job Motivations, Activities, and Satisfactions of Present and Prospective Women College Faculty Members, submitted April 14, 1959, was planned for completion within the contract dates, May 1, 1959 to October 31, 1961. Because of the illness of the chief investigator, Dr. Ruth E. Eckert, Professor of Higher Education, which occurred at the end of November, 1959, and the impossibility of locating a substitute investigator, the terms of the original contract could not be fulfilled. Work since December, 1959, therefore, has been confined to completion of preliminary phases of the investigation and the preparation of the final report on progress made, here submitted.

Section I: INTRODUCTION

A. The Problem

The three major aims for the study were the following:

(1) To provide information regarding the levels and types of academic positions women now hold in college, the possibility of their becoming a proportionately larger source of supply in the future, and the relation of supply to current college and graduate school enrollments.

(2) To find out why present women faculty members selected this field, how they prepared for it, what their present job responsibilities are, and what satisfactions they seek and obtain from their work.

(3) To explore attitudes of women students, at several levels of the college and graduate school program, toward service on college faculties.

As Professor Eckert stated in the initial request for support of the project:

> "With enrollments in American higher institutions likely to double within the next fifteen to twenty years, staffing problems have become a matter of high priority. Unless sufficient numbers of able and strongly motivated persons can be attracted to college positions, the monies spent for expanding physical facilities will yield little educational return. College teachers are themselves the producers of all types and varieties of educated talent, making this the strategic point at which to focus efforts aimed at a fuller utilization of manpower resources. Yet women, who now constitute less than 30 per cent of all full-time academic staff members, are apparently not being currently attracted to such careers even to the limited extent they were some years ago. Careful study given to the motivations and concerns of present women faculty members and to those students and others who might later qualify for faculty membership, should throw important light on how careers in this field might be made more appealing to intellectually able young women. By helping to discover women's view's on these problems, the present study should aid in recruiting new staff and in increasing job satisfactions among women now engaged in college teaching. A well-planned study in this field should also contribute to the general literature on occupational choice by showing how the college teacher's role -- and particularly that of the woman faculty member -- is perceived by students and by persons actively engaged in this career."

The proposal then listed questions and/or hypotheses related to the general problem and the major aims of the study, indicating that these would be refined and sharpened during the earlier stages of the investigation.

B. The Procedure

The plan of the investigation involved three principal phases or stages. The first two were to be carried on concurrently in the early period of the work, not only to provide information in themselves, but also to lay groundwork for the third phase.

Phase 1. A summarization of existing data, aimed to provide important background information regarding the place of women faculty members in American higher education, and the prospective sources for replenishing and extending the services women currently perform in colleges and universities. Trends in high school graduation and college enrollment of women, as well as employment information, needed clarification through summarizing material from many scattered current sources.

Phase 2. Utilization of Minnesota data gathered previously and that from other studies to check preliminary hypotheses as to why women join college faculties and how they assess their decisions. Some further interviewing of women included in the earlier Minnesota study was a part of this phase.

Phase 3. Probing more deeply than has previously been possible into a few apparently critical factors, Phase 3 was to involve:

(1) An interview study, the sample being women faculty members included in the Minnesota questionnaire study, selected because their questionnaire responses suggested important differences in motivation for college teaching.

(2) Follow-up studies of Minnesota Ph.D.'s.

(3) A study of current college and graduate students, sampled at different levels of the program, to determine how they perceive their college teachers, how many have considered careers in higher education, and what they see as the advantages and possible liabilities of faculty membership. The groups tentatively selected for study included (a) entering freshmen in Minnesota's four-year colleges; (b) graduating seniors in the same colleges; (c) persons beginning graduate work; (d) persons currently completing graduate study for the M. A. or Ph.D. degree.

As this brief summary of the three planned phases shows, the approaches were to include (1) bibliographical summaries of research already done on the topic of the project; (2) the use of questionnaires to obtain information from persons teaching in various types of colleges, from former Ph.D.'s who have not joined college faculties, and from students still in school; (3) interviews to throw further light on the motivations of persons presently serving in colleges; and (4) testing including interest and personality inventories.

C. Steps Taken

All of the initial work was focused toward the eventual delineation and sharpening of hypotheses, the preparation of questionnaires and interview schedules, the gathering of information for the selection of samples, and the detailed planning of Phase 3, the central core of the research. Wide-ranging reading and review of literature was completed; the cooperation of the Minnesota colleges was secured; faculty rosters for the sampling were obtained; studies were planned on selected parts of the total project; initial work on the sharpening of hypotheses and the designing of questionnaires was undertaken. In addition, data from an earlier follow-up of Minnesota Ph.D.'s were re-run to determine whether factors relating to women college teachers could be discovered from those data; and interviews with women college teachers were completed to yield data for planning the larger interview study projected under Phase 3.

Expenditures for the project after December 31, 1959 were confined to the writing and duplication of reports covering the first steps taken, with a view to producing material from the initial stages of the work which might be profitably considered in relation to further needed investigations of the main topic of the research. This final report, therefore, includes the following sections (in addition to Section I Introduction), each presented with brief explanatory comments:

Section II:	Review of Literature Reading notes concerning enrollment and employment trends and other areas related to the main project
Section III:	Interview Study Summary of a preliminary interview study of women faculty members
Section IV:	Follow-up of Ph.D. Holders Brief presentation of data concerning women holders of the University of Minnesota Ph.D. degree, obtained through a re-run of data from a previous follow-up study, with particular reference on the re-run to women college teachers
Section V:	Further Work Related to the Project Brief statements concerning doctoral studies now in progress, originally planned as investigation subsidiary to the project, or related to it
Section VI:	Summary Comments

Section II

REVIEW OF LITERATURE
(Reading Notes)

Comments: The summary of literature here presented is considerably longer (and more diffuse) than it would have been in the final report if the entire project could have been completed. In that case, a selection and pointing-up of material from the literature would have been pertinent. Since the wide reading initially done for the project was aimed toward extensive coverage to provide clues and information for questionnaire-building and for selection and clarification of hypotheses, the review is now included in its entirety as a part of the final progress report, in the hope that it may emphasize important trends related to the education of women. The review includes summaries concerning (1) progress of youth in earlier schooling, (2) plans of youth for college education, (3) men and women in college attendance, and (4) careers of women college graduates. After each section and its sub-sections, the main sources relevant to that part of the discussion are given in abbreviated form, with a complete bibliographical listing appended at the end of the review. The material for Section II was gathered by several of the project staff members and was summarized by Miss Lois Anderson. Section II should be regarded as reading notes, which we hope may be useful for persons considering research on the particular topics covered.

I. Progress of Youth in Earlier Schooling

A. General Trends

The trend toward generally increased enrollment reflects an increasing number of children in the school-age population, a greater proportion of the school-age population actually attending school, and a greater tendency for those in school to remain in school longer.

Fluctuations in school enrollments relate to changes or fluctuations in birth rates. During the period of 1869-1955, the total population more than quadrupled while the population age 5 through 17 multiplied somewhat more than three times. Between 1955 and 1957 the total population increased 3.6 per cent while the school-age population increased 7.8 per cent. The percentage of the total population falling in the age 5-17 category declined steadily from 30.3 per cent in 1869-70 to 20.3 per cent in 1949, but since that time, it has steadily increased to 22.7 per cent in 1955-56 and 23.6 per cent in 1957-58. In 1955-56, there were 37.3 million school-age children. As of July 1, 1957, the estimated school-age population was 40.2 million.

Enrollment in full-time public secondary schools was 6.7 million in 1940-41. In 1957-58 the enrollment was 7.9 million. Boys made up 43.6 per cent of the enrollment in public high school grades in 1909-10, 49.4 per cent in 1935-36, 46.8 per cent in 1945-46, and 49.3 per cent in 1949-50.

The per cent of children 5-17 years of age enrolled in full-time public elementary and secondary day schools was 61.5 per cent in 1870-71; 72.4 per cent in 1900; 81.3 per cent in 1930; 81.6 per cent in 1949-50; and 83.7 per cent in 1957-58.

During the past century, the number of public high school graduates has increased greatly. A previous high of 1,161,000 graduates was reached in 1941-43, followed by a decrease in the two succeeding bienniums. Since World War II, the long-range trend is upward. In 1957-58, there were 1,333,500 graduates.

Increased holding power of the public high schools is evident. In 1944-45, the number of graduates represented 46.7 per cent of those entering grade 9 four years earlier, compared with 62.5 per cent in 1950-51 and 67.3 in 1955-56.

Females slightly outnumber males in high school graduation. In 1955-56, men constituted 48.4 per cent and women 51.6 per cent of public secondary day school graduates. In 1957-58, men constituted 48.6 per cent and women 51.4 per cent of public secondary day school graduates.

In 1950-51, Wisconsin appeared to rank highest and Georgia lowest in high school retention. The states ranking among the highest ten (with the exception of New Hampshire and Utah) were all in the Midwest. The states ranking among the lowest ten (with the exception of New York and New Mexico) were located in the southeastern quadrant of the United States. Minnesota in 1950-51 was in the group of states showing a relatively high retention ratio at all educational levels, evidenced by the fact that 68.4 per cent of those enrolled in grade 5 in 1943-44 graduated in 1950-51.

Responses to the National Manpower Council's questionnaire revealed that girls earn better grades than boys; a smaller proportion of girls fail in school; girls constitute a majority of honor roll and scholarship society students, and their grades, in relation to their intellectual ability, are higher than is the case with boys. Girls also remain in high school on a full-time basis longer than boys, regardless of the curriculum pursued.

Little's study in Wisconsin revealed that girls outnumbered boys two to one in rank in scholastic achievement among those in the top 25 per cent of their graduating class.

The report of the Commission on the Education of Women (How Fare American Women?) cites recent investigations indicating that "The intelligence quotients and grades of girls in high school become lower when they consider that successful academic work militates against their popularity or femininity."

Sources:

Gaumnitz, Walter H., High School Retention by States

Little, State-Wide Inquiry Into the Decisions of (Wisconsin) Youth About Education Beyond the High School

National Manpower Council, Womanpower

U. S. Department of Health, Education, and Welfare, Preliminary Statistics of State School Systems, 1949-50 and 1955-56

B. Type of Study Program Pursued by Boys and Girls in High School

The 1956 study by Stice, Mollenkopf, and Torgerson (published by the Educational Testing Service, and hereinafter referred to as "The ETS Study") revealed that 35 per cent of the senior girls and 9 per cent of the senior boys were pursuing a commercial program. Another 6 per cent of the senior girls and 14 per cent of the senior boys were enrolled in some other vocational curriculum. In the senior year of high school two out of five girls and one out of four boys were enrolled in courses of study which emphasized development of skills in preparation for employment following graduation.

A significantly smaller proportion of girls than boys in the top 30 per cent of high school seniors were pursuing an academic program. The proportion of senior boys enrolled in science and mathematics courses was greater than the proportion of girls. This seems to indicate that girls tend to be less well prepared than boys are in science and mathematics for college entrance.

Sources:

ETS Study (Stice, Mollenkopf, and Torgerson, Background Factors and College Going Plans Among High Aptitude Public High School Seniors

II. Plans of Youth For College Education

A. Reasons Given by Youth For Desiring a College Education

In the ETS study, three out of five boys and almost half of the girls said they wanted a college education because it was a requisite for an occupation or it increased one's earning power.

In Iffert's study, men gave as reasons for attending college, in order of decreasing importance: occupational, academic, traditional, social service, and personal interests. Women gave as reasons for attending college, in order of decreasing importance: academic, occupational, personal, traditional, and social service concerns. After college, in retrospect, men and women both ranked social service, personal, and traditional reasons in third, fourth, and fifth place.

Sources:

ETS Study

Iffert, Retention and Withdrawal of College Students

B. Who Influences Students Most Regarding Plans Beyond High School?

Little (the Wisconsin Study) revealed that parents had a stronger influence than did teachers or counselors on decisions to attend college. Terman's follow-up of his gifted group revealed that superior educational attainment of parents seemed to have been a factor in the high rate of college entrance among the gifted. Parents of 88 per cent of the men and 85 per cent of the women encouraged college attendance (remarkable in the 1920's and 1930's). More than three times as many men as women said that their parents were indifferent or left the decision up to the subject.

Sources:

Little, State-Wide Inquiry Into the Decisions of (Wisconsin) Youth About Education Beyond the High School

Terman and Oden, The Gifted Group at Mid-Life

C. From What Types of Homes or Communities Do College Bound Students Come?

The ETS study revealed that boys and girls from large families were less likely to be interested in college than were those from small families. Among students planning to attend college, the proportion of those planning to attend immediately after high school graduation increased sharply with the level of the father's education. Among students hoping to attend college later, there was a trend, more noticeable for girls than for boys, for the proportion to go down as the level of the father's education increased.

Havemann and West reported that persons born in the East had relatively good chances of going to college, and persons born in the South had poor chances of going to college.

Region	Percent of Total U. S. Population	Percent of College Graduates
East	26	36
Midwest	30	34
South	31	20
West	13	10

Forty-one per cent of the women and 32 per cent of the men graduates had at least one parent who had attended college.

Sources:

ETS Study

Havemann and West, They Went to College

D. What Kinds of Colleges Do Women Attend?

Little (Wisconsin) reported that although as many girls as boys were planning to continue school beyond high school, more girls were attending schools other than degree granting institutions.

Holland's study of National Merit Scholarship winners (Determinants of College Choice) revealed that girls selecting high-rank institutions (based on the Knapp-Greenbaum index of scholarly productivity) tended to have more academic aptitude than did girls selecting low-rank institutions. For girls, institutional reputation was not related to choice.

Holland's study of undergraduate origins of American Scientists revealed that both men and women Merit Scholars and Certificate of Merit winners attended "high" productivity (Knapp-Goodrich Index) colleges in frequencies beyond the "expected" frequencies. Among women selecting a college with a high index, "small size" and a "liberal arts orientation" were important factors. Among women selecting an institution with a low index, "attending a good college" and the prestige of the college were important factors. Among men selecting an institution with a higher productivity index, important factors were academic standing, small size, research reputation, or liberal arts orientation.

Sources:

Holland, Determinants of College Choice

Holland, Undergraduate Origins of American Scientists

Little, State-Wide Inquiry Into the Decisions of (Wisconsin) Youth About Education Beyond the High School

E. What Happens to High School Graduates Who Do Not Attend College?

Little's Research in Wisconsin showed that seven months after high school graduation, 76 per cent of the high ability girl graduates who did not attend college were employed full-time. Girls were mainly employed in clerical work, while boys were mainly employed in semi-skilled or manual work.

Terman's follow-up of the gifted group (at mid-life) revealed that almost half of the men who did not enter college felt that they had had as much education as they wanted, while 32 per cent of the women without college education were satisfied with their education. Of those high school graduates who did not go to college, more than one-third of the men and one-fourth of the women had taken courses at trade, business, technical, art, or other specialized schools.

Sources:

Little, State-Wide Inquiry Into the Decisions of (Wisconsin) Youth About Education Beyond the High School

Terman and Oden, The Gifted Group at Mid-Life

III. Men and Women and College Attendance

A. General Trends

The total enrollment in higher educational institutions in the fall of 1958 was 6.2 per cent above that for 1957 and 54 per cent above that for 1951.

In 1958 women made up approximately 35 per cent of the total opening enrollment of degree-credit students in all institutions, the first time opening enrollment of female students in all degree-granting institutions has increased at a slightly faster rate than for males since 1957. Of all young women capable of doing college work, only about one-fourth graduate from college.

Havemann and West (1947) revealed a long-term trend away from the humanities and the professions as fields of major study. There was a trend toward increased numbers in the social sciences and also in business administration. There was a trend toward decreased numbers in the sciences, especially marked in engineering.

Little reported that about half of Wisconsin 1957 high school graduates were continuing with some type of education beyond high school. Three of every five graduates who planned to go to college were boys. Although the number of graduates planning on further schooling was equally divided between boys and girls, more girls were attending schools other than degree-granting institutions. Popular courses for girls were teaching and nursing, whereas for boys the popular courses were engineering and business administration. Occupational objectives were evident in plans for collegiate education.

Finances were a significant and deciding factor among persons wanting to attend college but not doing so. However, a sizeable number (including superior youth) were not planning to attend college even though they were able to finance a college education. Extent of parents' education appeared to have a stronger influence on decisions about college attendance than did parents' occupation.

Characteristically, college-going Wisconsin high school graduates ranked in the top one-third of their high school class in both scholastic achievement and mental ability test scores. Girls received better grades in high school studies, although boys and girls scored alike on mental ability tests. Only 10 per cent of girls planning to attend college, as compared with one-third of the boys, expected to contribute more than $500 toward expenses of the first year.

In the National Merit Scholarship testing program, girls made up 55 per cent of the total selected to compete, but boys accounted for 69 per cent of scholarships awarded on the basis of a special test. Among the students taking the College Entrance Board examinations, more boys than girls qualified for college entrance or scholarship aid on the basis of tests measuring ability to do college work.

Iffert's study revealed that the field of first interest for the largest number of college women was education. About 62 per cent of the women persisted in their interest in education. Home economics ranked second as a field of interest for women. A higher percentage of constant interests was noted for women than for men. Persistence in college was promoted by occupation-centered interests. Iffert also reported that more scholarship funds were allocated to men than to women. The percentage of women was higher than that of men only in the group receiving scholarship aid less than enough to cover 20 per cent of expenses.

The ETS study revealed that high school senior boys preferred as areas of interest in college (in order of decreasing popularity) engineering, physical science, business, liberal arts, and the health professions. Among girls the health professions ranked first and were followed by education, business, liberal arts, and the fine arts. One girl out of seven expected to go into education, whereas only 56 boys out of 3,839 expected to go into education.

Of the most able high school students, far less than 10 per cent saw their educational goals completely frustrated. Terman's follow-up of his gifted group reported that nearly 70 per cent of the gifted group graduated from college, a feat achieved during the 1930-40 period when less that 8 per cent of the total of comparable age were graduating from college. Among the gifted group, the proportion of women graduates is almost as great as the proportion of men graduates. This is in contrast to Wolfle's estimate (1953) of a sex ratio of 60 men to 40 women among the generality of college graduates.

At present, women are heavily concentrated in a few fields of undergraduate education, although some women are found in almost all fields. About half of all bachelor's and first professional degrees earned by women are in four fields of study -- education, nursing, library science, and home economics.

B. First, Second, and Third Level Degrees

The percentage of earned first level degrees conferred upon women more than doubled between 1889-90 and 1939-40 (from 17.3 per cent to 41.3 per cent). There was a sharp increase between 1909-10 and 1919-20. Between 1939-40 and 1949-50, the percentage dropped from 41.3 per cent to 23.9 per cent. This was due, no doubt, to the fact that greatly increased numbers of men were enrolled in college after World War II, while only slightly increased numbers of women were enrolled in college during the same period. In 1958, 33.6 per cent of bachelor's degrees went to women.

There was a marked increase in total bachelor's degrees from 136,000 in 1946 to 434,000 in 1950. Then there was a five-year decline to 287,000 in 1955. In 1957-58, the total had increased to 365,784. The percentage comparison between men and women receiving bachelor's degrees did not vary one per cent from 1950-55.

For first-level degrees, the fields most emphasized by women in 1957-58 were home economics (99.2 per cent of total graduates, men and women), nursing (99.2 per cent), medical technology (92.1 per cent), and general teaching fields (86.7 per cent). For first level degrees, the fields least emphasized by women in 1957-58 were forestry (.1 per cent of total graduates), engineering (.8 per cent), trade and industrial training (.8 per cent), dentistry (1.1 per cent), and agriculture (1.6 per cent).

Ninety per cent of all first level degrees in 1957-58 were conferred upon men in the following fields: agriculture, architecture, business and commerce, engineering, forestry, dentistry, medicine (M. D. only), law, physics, earth sciences, economics, and trade and industrial training.

One may compare sub-groups of women with total women graduates looking through at major fields of study. Among June 1957 women college graduates, education ranked first as a major (33 per cent) followed by humanities and arts (19 per cent), English (8 per cent), art, foreign languages and speech (each 3 per cent), and music (2 per cent). Other undergraduate majors for women were social sciences (15 per cent), home economics (8 per cent), and business and commerce (5 per cent). Nursing majors rose from 3 per cent in 1955 to 6 per cent in 1957. Percentages of women majoring in the physical sciences, biological science, and mathematics did not increase, remaining at approximately the same level as in previous years.

The Office of Education in the Fall of 1957 began to survey resident junior-year college students enrolled as majors in science and mathematics. In 1958, the number of junior-year science and mathematics majors was 55,777, an increase of 10.4 per cent over the 1957 total of 50,513. The percentage increase is almost three times the increase of 3.8 per cent for the total number of junior-year students in the nations' colleges and universities. Science and mathematics majors constituted 13.8 per cent of all junior students in 1958 as compared with 12.9 per cent in 1957.

In 1958, four-fifths (79.8 per cent) of all junior-year science and mathematics majors were men. Proportions of men were highest in the physical sciences (88.1 per cent) and in the biological sciences (77.5 per cent). Proportions of women were highest in mathematics (28.1 per cent) and in the general program in sciences (28.1 per cent). While the men's increase in number of science and mathematics majors in 1958 was 9.8 per cent, the women's increase was 12.8 per cent. In 1957, women constituted 19.8 per cent of all junior-year science and mathematics majors, while in 1958 the percentage for women was 20.2 per cent.

Among the publicly controlled institutions of the four types (universities, liberal arts colleges, teachers colleges, and technological schools), teachers colleges showed the greatest relative gain (22.9 per cent) from 1957 to 1958 in number of science and mathematics majors, although the greatest relative gain (15.4 per cent) in total junior-year enrollment occurred in liberal arts colleges. Among privately controlled institutions of the four types, the separately organized technological schools showed the greatest relative gain (13.7 per cent) in number of science and mathematics majors, while the greatest relative gain (7.0 per cent) in total junior-year enrollment was in liberal arts colleges.

Account must be taken of the fact that women are increasing more rapidly than men in the total junior-year population. The men's interest in science and mathematics thus appears to be greater than that of women.

The percentage of total second level degrees conferred upon women doubled between 1899-1900 and 1939-1940. The peak came in 1929-1930 (40.4 per cent), dropping slightly (to 38.2 per cent) in the next decade, with a still further drop in the following decade (to 29.2 per cent). Contrary to the trend for men, the number of women qualifying for the master's degree showed no increase from 1946-1951.

At the master's level, approximately 33 per cent of all degrees were conferred on women in 1957-1958. The percentage of second level degrees conferred on women during 1957-1958 did not differ greatly when comparison was made between publicly and privately controlled institutions.

For second level degrees, the fields receiving the most emphasis from women in 1957-1958 were medical technology (85.7 per cent of the total awarded), nursing (99 per cent), home economics (98.4 per cent), and library science (80.2 per cent); and the fields receiving least emphasis from women were engineering (.3 per cent of the total awarded), agriculture (1.3 per cent), forestry (1.9 per cent), business and commerce (3.6 per cent), and law (4.1 per cent). For second level degrees, women made up at least one-half of all graduates in the general teaching fields (education).

The percentage of third level degrees conferred upon women slightly more than doubled between 1899-1900 and 1939-1940 and then dropped in the decade 1939-1940 to 1949-1950. Approximately 11.8 per cent of all doctor's degrees were conferred upon women in 1957-1958. Little change is anticipated in projected third level degrees up to 1969-1970. The percentage conferred on women in 1969-1970 is expected to be about 9.4 per cent. At the doctorate level in 1957-1958, a slightly greater percentage of degrees was conferred upon women in privately controlled institutions than in publicly controlled institutions.

For third level degrees, fields receiving most emphasis from women in 1957-1958 were modern foreign languages, library science, general teaching fields, and home economics. Women received less than 10 per cent of third level degrees in agriculture, business and commerce, engineering, health professions, mathematics, philosophy, astronomy, chemistry, physics, religion, basic social sciences, economics, political science, and applied social sciences.

Fields chosen by women seeking the doctorate have little or no relation to the need for college teachers. Although women have enjoyed considerable success as mathematics teachers at the high school level, few women pursue doctoral degrees in this field. Mathematics is widely advertised as a field of acute shortage, and yet women do not seem to fill the openings in this field. According to Womanpower, only one woman out of every 300 capable of earning a Ph.D. does so. Terman's work with the gifted group revealed an unusually high percentage of doctorates. Whereas the current percentage of college graduates who get a doctor's degree is 2 per cent, 14 per cent of the gifted men and 4 per cent of the gifted women, or a 10 per cent total for the sexes combined, took the doctor's degree.

During 1957-1958, nine states combined conferred 50.7 per cent of all first level degrees. The nine states were New York, California, Pennsylvania, Texas, Illinois, Ohio, Massachusetts, Michigan, and Indiana. These nine states also awarded 59.9 per cent of all second level degrees and 64 per cent of all doctorates conferred in 1957-1958. In each of these nine states, at least 29 per cent and up to 35.9 per cent of first level degrees were earned by women, and at least 24.1 per cent and up to 46.3 per cent of second level degrees were earned by women. No doctorates were earned by women in 1957-1958 in Arizona, Delaware, Idaho, Maine, Mississippi, Montana, Nevada, North Dakota, South Dakota, Vermont, West Virginia, and Wyoming.

The Knapp-Goodrich study reported that less than 2 per cent of the Ph.D.'s in science were women. However, the Knapp-Goodrich study itself lacked data regarding women scientists, since only male scientists were included, and women's colleges were excluded from the list of colleges and universities.

A look at other specific studies reveals some interesting findings relative to women and graduate education.

Little reported that only 5 per cent of the graduating college women were moving to advanced studies, whereas 20 per cent of the men were moving in this direction. About one-third of men and women college graduates moving to advanced studies had received appointments to scholarships, fellowships, or assistantships at the university they planned to attend.

About 9 per cent of the 1957 women college graduates were attending school full-time and 12 per cent part-time. Highest percentages of graduates attending school full-time were among those with undergraduate majors in the biological sciences, followed by foreign languages, physical sciences, sociology, and history. Education was the leading field of graduate study for the class of 1957 women. Almost three-fifths of the full-time students were candidates for a master's degree and a few (4 per cent) were candidates for a doctorate. Ten per cent of the full-time students and 42 per cent of the part-time ones were not candidates for any degree or certificate.

In A Criticism of the Graduate School of the Arts and Sciences in Harvard University and Radcliffe College, Elder revealed a difference between men and women in the length of time taken for the Ph.D. degree. Twenty-six per cent of the men and 44 per cent of the Radcliffe women took four to ten years from the preliminary examinations to the Ph.D. More women than men gave family obligations as the reason for delay. Comparison of men and women in regard to the financial aspects showed that more women than men (25 per cent vs. 14 per cent) depended on outside work to finance their education. There is a definite need for more scholarship assistance to women. Women had less opportunity than did men for teaching experience during graduate work. Thirty-seven per cent of the men and 48 per cent of the women had no experience as teaching fellows.

Gropper and Fitzpatrick investigated factors which influenced the college senior to continue his education. Students in the sample were drawn from one professional field (law) and from seven undergraduate and graduate fields in the physical sciences, social sciences, and humanities.

Current and prospective students attached primary importance to influence of their home environments on their decision to attend college. In contrast, they cited their own crystallized educational or vocational goals as the most important reason for deciding to seek graduate or professional education. Students not planning advanced education most frequently mentioned lack of finances as the chief obstacle. Most decisions about advanced education were made during college years. Students frequently reported they were influenced by other people and by their own school experience to specialize in a particular field, but they infrequently reported such influences relative to their decision to seek advanced education. Vocational considerations exerted relatively small influence in decisions relative to choice of field of study. There was a small, but statistically significant, tendency for students to plan advanced education if their choice of field was faculty-influenced.

Paternal occupation and education were found to be related to the plans male college seniors had for graduate education, but paternal income was not found to be related. Sixty-three per cent of the graduate students depended on a scholarship, fellowship, or assistantship, at least in part.

Gropper and Fitzpatrick reported also that a student was more likely to plan on graduate education if he had had an undergraduate teaching or research assistantship. Provision of more undergraduate teaching or research assistantships may be significant as a way to encourage qualified undergraduate students to seek advanced education and even to consider college teaching as a career.

Women more than men (27 per cent vs. 20 per cent) reported that their graduate education decisions were based on educational considerations. More women than men (39 per cent vs. 30 per cent) reported that school experiences aroused their interest in their chosen fields. Family status was found to be related to the men's decisions to seek advanced education but not related to the women's decisions to seek advanced education. Individual preferences, rather than any strong pressures to choose the best possible educational and vocational plan, were indicated as determining factors for young women.

Grigg reported an obvious difference among levels of women planning for graduate education: 52.3 per cent of senior girls vs. 34 per cent of freshmen girls were planning for graduate education. Among the students in this study, 27.3 per cent hoped to receive financial aid through a fellowship; 22.2 per cent planned to work part-time; and 21.3 per cent planned to use savings during the period of graduate work. Although the largest percentage of total fellowships probably would go to those students seeking master's degrees, a larger percentage of doctoral students anticipated receiving a fellowship.

Students included in the Grigg report who were seeking a master's degree indicated that their two most frequent reasons for advanced study were "economic" and "to meet professional requirements."

Among students seeking a Ph.D., 91.7 per cent gave as reasons "to gain proficiency in subject matter" and "to meet professional requirements."

For Grigg's sample, college faculty members constituted the group most influential in the decision of students for graduate education. However, 33 per cent of the participants stated that the decision to seek advanced education was made by the student alone. A comparison of those who desired to continue their education and those who did not failed to show significant differences in factors such as occupation and education of father or size of home community.

While there was a significant difference (in Grigg's study) in scores on the A. C. E. test scores between male students going to graduate school and male students not going to graduate school, no statistically significant difference existed among two similar groups of female students. However, females wishing to attend graduate school received better grades than those not wishing to attend graduate school. This result might be due to one of two factors: (1) over-achieving on the part of girls who wish to secure advanced education, or (2) working up to capacity.

In Terman's gifted group, two-thirds of the gifted women who completed college entered graduate school. Of the gifted who graduated from college, 56 per cent of the men and 33 per cent of the women took one or more advanced degrees. However, slightly more than one-tenth of the men and one-fourth of the women who entered graduate school did not take a graduate degree. Deterring factors for the group not taking a graduate degree were change of interest, lack of finances, and attractive job openings. Frequently, and especially among women, the graduate work was taken to get professional credentials (as in teaching) rather than for the degree itself.

The Knapp-Greenbaum study revealed that woman were attracted more to humanities and less to science. Women more rarely received doctorates, and they received university fellowships somewhat more frequently than other types of financial aid. Female awardees from coeducational universities were more inclined to science. Colleges for women had the highest average female productivity index among all institutions. Slightly less than one-half of the women awardees came from universities, while over a quarter came from women's institutions. Coeducational liberal arts colleges and the all women's colleges followed essentially the same pattern with the highest indices in the area of humanities.

Sources:

American Council on Education, A Fact Book on Higher Education

ETS Study

Elder, A Criticism of the Graduate School of Arts and Sciences in Harvard University and Radcliffe College

First Jobs of College Women, Class of 1957

Grigg, "Who Wants to go to Graduate School and Why?"

Gropper and Fitzpatrick, Who Goes to Graduate School?

Havemann and West, They Went to College

Huddleston and Poole, Junior-Year Science and Mathematics Students

Iffert, Retention and Withdrawal of College Students

Knapp-Goodrich, Origins of American Scientists

Knapp-Greenbaum, The Younger American Scholar

Little, State-Wide Inquiry Into the Decisions of (Wisconsin) Youth About Education Beyond the High School

NEA, Teacher Supply and Demand in Colleges and Universities, 1955-56 and 1956-57

NEA, Teacher Supply and Demand in Universities, Colleges and Junior Colleges, 1957-58 and 1958-59

NEA, Teacher Supply and Demand in Degree-Granting Institutions, 1954-55

National Manpower Council, Womanpower

Terman and Oden, The Gifted Group at Mid-Life

U. S. Department of Health, Education, and Welfare, Office of Education, Earned Degrees Conferred by Higher Educational Institutions, 1957-58

C. Persistence in College

Iffert reported that the first year of college was the most critical drop-out period. Approximately 60 per cent of all students who entered degree-granting institutions received degrees. Men and women who were college community residents had a significantly better persistence record than did students who lived with parents, relatives or friends. Occupation-centered interests promoted persistence in college. (This might help to explain the greater persistence of women.)

Among women students, reasons for leaving college in order of decreasing importance were plans for marriage, full-time work, and personal financial difficulties. Among men students, reasons for leaving college in order of decreasing importance were military service (enlisted), personal financial difficulties, and lack of interest in studies. More than one-fourth of the men and nearly one-fifth of the women who discontinued college attendance gave as an important factor difficulty with college work.

Sources:

Iffert, Retention and Withdrawal of College Students

D. Marriage as a Competing Factor With College Education

Among girls included in the ETS study who did not plan on college attendance, half stated that it was not a goal because they would rather get married. Little's Wisconsin study revealed that one out of eleven women college graduates had chosen marriage and homemaking as her immediate career.

First Jobs of College Women, Report of Women Graduates, class of 1957, revealed that 38 per cent of the class of 1957 reported six months after graduation that they were married. In comparing this percentage with 37 per cent for the 1956 class and 34 per cent for the 1955 class, a trend toward earlier marriage is seen.

Sources:

ETS Study

First Jobs of College Women, Class of 1957

Little, State-Wide Inquiry Into the Decisions of (Wisconsin) Youth About Education Beyond the High School

E. Women and Projected College Attendance

In relation to projected degrees for women, little change is anticipated at all levels in the years between 1959-60 and 1969-70. Projected first level degrees for women remain close to 33 per cent, with 31-33 per cent for second level degrees. For doctorates, a slight drop from 10.3 per cent to 9.4 per cent is anticipated. Although the projected totals of men and women receiving earned degrees at the three levels increase considerably, the proportions of men and women at each level remain fairly stable.

Sources:

Conger and Fullam, Projection of Earned Degrees to 1969-1970

IV. Careers of Women College Graduates

A. Women College Graduates of One Year (1957)

Women of the class of 1957 were engaged in employment or school activities to about the same extent as their predecessors. There was, however, an increase from 9 per cent in 1955 to 13 per cent in 1957 in those both employed and in school. The main activity of the graduates was full-time employment. Nearly three-fourths of the married graduates were working.

Most of the women graduates obtained employment related to their fields of study. Those able to obtain professional positions increased from 80 per cent in 1955 to 83 per cent in 1957.

In relation to occupations, the majority (59 per cent) of the employed graduates were teachers; 6.9 per cent were nurses, a significant increase over the percentage for the two preceding years; 6.7 per cent were secretaries and stenographers; 3 per cent were biological technicians; and 2 per cent were welfare workers. The remaining 22 per cent held a wide variety of jobs.

Eighteen per cent of the total group, 19 per cent of the single women, and 14 per cent of the married women planned to have a career. Of those who had no interest in a career but planned to work indefinitely, 10 per cent were single and 9 per cent were married.

Sources:

U. S. Department of Labor, First Jobs of College Women,
Class of 1957

B. Women at Various Levels in the Educational System

According to the latest available figures (1958-59), 87.2 per cent of public elementary school teachers, 53.7 per cent of public secondary school teachers, and 21.8 per cent of the faculty members of institutions of higher education are women. The proportion of men teachers in public elementary and secondary schools has increased slightly in recent years, while the proportion of men and women on the faculties of institutions of higher education has remained relatively stable.

In 1955-56, it was estimated that men constituted 26 per cent of the total non-supervisory instructional staff in all schools (state schools), less than 13 per cent in elementary schools, and 49 per cent in secondary schools.

In teachers' colleges, more than one-third of the regular full-time faculty are women. In small non-public colleges, women make up about one-third of the total faculty. In contrast, women comprise about one-seventh of the total faculty in non-public universities. In all types of institutions women comprise slightly more than one-fifth of faculty personnel.

The National Education Association study of Teacher Supply and Demand in Colleges and Universities, 1955-56 and 1956-57, reported that 79.2 per cent of 727 responding institutions indicated that qualified women might be employed in larger numbers in one or more fields. Separately, 34.9 per cent indicated an interest in women as faculty members without limitation as to field of instruction.

However, the NEA report for 1957-58 and 1958-59 indicated that in 23 per cent of the 913 institutions included there was some doubt that employment of women could or should be expanded to a great extent.

Of the 913 institutions, 77 per cent expressed readiness to utilize women to a somewhat greater degree than formerly, and 28.5 per cent believed that larger numbers of qualified women should be welcomed in all fields (except agriculture, industrial and vocational arts, and men's physical education). Six per cent visualized a larger role for women in "most fields." The social sciences, English, mathematics, and foreign languages were most frequently emphasized as teaching fields which should be open to larger numbers of women. The public universities indicated a greater than average readiness to employ women teachers in mathematics and the physical sciences.

The NEA study also showed that junior colleges were slightly less willing to consider using larger numbers of qualified women on their staffs.than were other types of institutions. For example, in physical sciences, where the shortage is acute, only one in twenty junior college employing officials indicated readiness to accept women teachers.

Sources:

NEA, Teacher Supply and Demand in Colleges and Universities, 1955-56 and 1956-57

NEA, Teacher Supply and Demand in Universities, Colleges and Junior Colleges, 1957-58 and 1958-59

C. Men and Women on College Faculties

Of Terman's gifted group, 6.7 per cent of the women and 7.5 per cent of the men were members of college or university faculties.

Elder reported that 32 per cent of the Harvard men and 20 per cent of the Radcliffe women were teaching in major private or state universities, and 15 per cent of the men and 26 per cent of the women were teaching in liberal arts colleges. This report pointed out, also, that women were promoted more slowly than men.

The per cent of new full-time college teachers with the earned doctor's degree has dropped gradually from 31.4 per cent in 1953-54 to 23.8 per cent in 1958-59. Since 1953-54, among newly employed full-time teachers, holders of the earned doctor's degree have decreased 25.2 per cent while those with less than the master's degree have increased 26.9 per cent.

Kelly's research concerned factors which made the college teacher's job unsatisfactory or satisfactory. Of 1,351 college teachers, 69.7 per cent were satisfied and 23.8 were dissatisfied with the size of classes; 16.5 per cent dissatisfied with the number of class meetings per week; and 15.9 per cent were dissatisfied with the number of different class preparations required. In general "unsatisfactory" votes were not cast by those with the heaviest load. Non-teaching duties could not be said to account for any significant amount of job dissatisfaction among faculty personnel in higher education. While over half of the college teachers considered salary to be satisfactory, working conditions were considered unsatisfactory. Office space was least satisfactory, and tenure was most satisfactory.

Instructors (53.6 per cent of whom were working toward an advanced degree) seemed inclined toward leaving the institution rather than planning to stay. Professors generally planned to stay in higher education as did more than 80 per cent of the instructors. Kelly's general conclusion was that college teaching is regarded as a permanent calling by most faculty personnel and is not looked upon as a stepping stone to something else. There was no breakdown of findings by sex.

A study by Eckert and Stecklein of almost 750 faculty members in Minnesota's 32 public and private colleges, including some 200 women, revealed some interesting data. A higher proportion of women than men faculty members had grown up in the Minnesota area. Home background factors did not appear to differentiate between men and women faculty members. A higher percentage of women than men were single.

Few, either men or women, had seriously considered college teaching as a career during their undergraduate study. A significantly higher percentage of men than of women who became college teachers reported that they had viewed this career favorably as a personal goal. Women faculty members gave greatest weight to three reasons as influencing their choice of a college teaching career: the offer of a college teaching job, an interest in working with college-age students, and a desire to continue study in a chosen subject field. Women, more than men, appeared to have been influenced by external circumstances.

Women were less likely than were men to have started graduate work shortly after receiving their baccalaureate degrees. Twenty-six per cent of the women and 51 per cent of the men had earned doctorates. Significantly more women than men reported use of personal savings for further studies.

Differences in teaching background were revealed also. A significantly higher proportion of women had come to college teaching directly from a position in the lower schools. Promotion of women was slower than that of men as evidenced by the fact that only three-fifths as many women as men had attained associate or full professorships.

Women were notably absent in the fields of mathematics, biological and physical sciences, and most professional specialties.

(This finding is in accord with previous National Education Association reports.) Half of all full-time women teachers in these colleges were teaching in the humanities or in professional education courses.

Men devoted relatively more time to research activities, committee work, and off-campus projects, whereas women gave more of their time to teaching and to services to student groups. A much greater percentage of women than men (63 per cent vs. 36 per cent) spent no time on research and scholarly writing.

As chief satisfactions, women were more likely to mention "good students" and "desirable colleagues," whereas men were more likely to mention the opportunities for research and the freedom and independence of college teachers.

Among subjects for the Dickson, Richards, and Anderson study of college teachers of education in Ohio, 67 per cent of the men and 39 per cent of the women had doctor's degrees. Ten per cent of the women and 90 per cent of the men were married; 8 per cent of the men and 85 per cent of the women were single; and the remainder were widowed, divorced, or separated.

Women were less interested in and less prepared in the physical, biological, and social sciences. Men had more inclusive undergraduate preparation than did women. While women tended to report experience in elementary schools, men tended to report experience in secondary schools. Men exceeded women in administrative experience. A larger percentage of men had held positions in privately supported universities, while slightly more women had served in privately supported liberal arts colleges.

A higher percentage of women than of men taught courses in basic teaching methods, materials, curriculum, and child development, men being more involved in teaching courses in educational administration, history and philosophy of education, and student personnel.

Here, as in other studies, the findings were that men spent more time than women did in research and writing. Men tended to receive about $1,000 a year more salary than women. Men generally were better qualified academically, had a better rounded experience in education, participated in more diverse teaching activities, had higher rank, and were paid higher salaries than women.

Lindquist's study revealed that mathematics was the most frequently cited field of shortage of faculty with physics ranking second and engineering third. Competition from business, industry, and government was related to shortage of faculty in these crucial areas. The only mention of women as a separate group was in a list of practices employed to augment staffs and retain faculty members in which increased employment of women as college teachers was recommended.

Newburn's report, Faculty Personnel Policies in State Universities, pointed out that the great majority of new faculty come to institutions as "junior staff." In most instances two major qualifications for appointment were mentioned: (1) teaching ability or aptitude, and (2) ability or potentiality for research and publication. A third factor or qualification, ability to get along with one's colleagues, was given much weight by department chairmen and the teaching staff, even though it has not been much emphasized in the literature. For younger men, timing of an offer appeared to be quite important. Although all men mentioned conditions of work, the senior men gave much weight to this aspect of college teaching.

Newburn found that one of the basic factors in securing the mature scholar related to the nature and quality of the staff in the department and in related areas. More than any other single item, the intellectual setting influenced the best-qualified individual. The main problem was getting a nucleus of well-qualified men in the beginning.

Factors most prominently related to evaluation of staff were teaching effectiveness, research and creative work, professional competency and activity, institutional and public service, and personality and personal factors. Teaching effectiveness and research and creative work were important factors in all institutions.

Newburn's data were not divided according to sex, but such a breakdown might be possible from the original data.

Adams reported that the socio-economic origins of college teachers were slightly higher than those of high school teachers. However, since the 1890's, the origins of college teachers have been gradually declining. This study contained no breakdown of data by sex.

Farber and Bousfield studied the reactions of 87 juniors and seniors at the University of Connecticut to college teaching as a profession. Thirty-nine per cent indicated favorable and 61 per cent indicated unfavorable responses to a suggestion that they prepare for a college teaching career. Women tended to react less favorably than men. The students in the sample appeared to have a cognitive image of college teaching as a profession with high ability demands, arduous preparation, and insufficient financial rewards. Attractive features of college teaching included association with students, the pleasant atmosphere of a university, enjoyment of teaching, and lack of stress of the work. College teaching was regarded generally as having moderately high prestige and status. Many students felt that the college teacher role was not congruent with their personalities and interests.

Sources:

Adams, "Origins of American Occupational Elites"

Dickson, Richards, and Anderson, "The Status of College Teachers of Education in Ohio"

Eckert and Stecklein, "Academic Woman"

Elder, A Criticism of the Graduate School of Arts and Sciences in Harvard University and Radcliffe College

Farber and Bousfield, "College Teaching As a Profession"

Kelly, "How Do Faculty Members Like Their Jobs?"

Lindquist, College and University Faculties

Newburn, Faculty Personnel Policies in State Universities

Terman and Oden, The Gifted Group at Mid-Life

U. S. Department of Health, Education and Welfare, Office of Education, Earned Degrees Conferred by Higher Educational Institutions, 1957-58

U. S. Department of Health, Education, and Welfare, Office of Education, Progress of Public Education in the United States of America, 1958-59

Bibliography

Adams, Stuart, "Origins of American Occupational Elites," *American Journal of Sociology*, 62:4:360-368, January, 1957

Conger, Jr., Louis H. and Fullam, Marie G., *Projection of Earned Degrees to 1969-70*, U. S. Department of Health, Education, and Welfare, September, 1959

Davis, Hazel and Samuelson, Agnes, "Women in Education," *Journal of Social Issues*, 6:3:25-37

Dickson, George E., Richards, Rachel and Anderson, Earl W., "The Status of College Teachers of Education in Ohio," *Educational Research Bulletin*, 36:245-266, November 13, 1957

Eckert, Ruth E. and Stecklein John E., "Academic Woman," *Liberal Education*, 45:3:391-397, October, 1959

Elder, J. R., *A Criticism of the Graduate School of Arts and Sciences in Harvard University and Radcliffe College From Those Who Took the Ph.D. at These Institutions Between 1950-1954, 1958*

Farber, Maurice and Bousfield, W. A., "College Teaching as a Profession," *Journal of Higher Education*, 29:2:7072, February, 1958

Gaumnitz, Walter H., *Higher School Retention* by States, U. S. Department of Health, Education, and Welfare, June, 1954

Grigg, Charles M., "Who Wants to go to Graduate School, and Why?" *Research Reports in Social Science*, 2:1:1-26, Florida State University, February, 1959

Gropper, George L. and Fitzpatrick, Robert, "*Who Goes to Graduate School*?" American Institute for Research, Pittsburgh, September, 1959

Havemann, Ernest and West, Patricia S., *They Went to College*, New York, Harcourt, Brace and Company, 1952

Holland, John L., *Determinants of College Choice*, National Merit Scholarship Corporation, Mimeographed

Holland, John L., "Undergraduate Origins of American Scientists," *Science*, 126:3271:433-437, September 6, 1957

Huddleston, Edith M. and Poole, Hazel C., Junior-Year Science and Mathematics Students, Fall, 1958, U. S. Department of Health, Education, and Welfare, Office of Education, 1959

Iffert, Robert E., Retention and Withdrawal of College Students, Bulletin, 1958, No. 1, U. S. Government Printing Office, 1957

Kelly, Fred J., "How Do Faculty Members Like Their Jobs?", Higher Education, 5:193-196, May 1, 1949

Klein, Viola, "The Sterotype of Femininity," Journal of Social Issues, 6:3:3-12, 1950

Knapp, R. H. and Goodrich, H. B., Origins of American Scientists, Chicago: University of Chicago Press, 1952

Knapp, R. H. and Greenbaum, J. J., The Younger American Scholar: His Collegiate Origins, Chicago: University of Chicago Press, 1953

Lindquist, Clarence B., College and University Faculties, U. S. Department of Health, Education, and Welfare, Office of Education, Bulletin, 1959, No. 27

Little, J. Kenneth, A State-Wide Inquiry Into Decisions of Youth About Education Beyond the High School, University of Wisconsin, September, 1958

Mead, Margaret, "Towards Mutual Responsibility," Journal of Social Issues, 6:3:45-56, 1950

National Education Association, Research Division, "Teachers For Our Colleges," NEA Research Bulletin, 36:1:13-22, February, 1958

National Education Association, Research Division, Teacher Supply and Demand in Colleges and Universities, 1955-56 and 1956-57

National Education Association, Research Division, "Teacher Supply and Demand in Degree-Granting Institutions, 1954-55," Research Bulletin 33:4:127-163, December, 1955

National Education Association, Research Division, Teacher Supply and Demand in Universities, Colleges, and Junior Colleges, 1957-58 and 1958-59, Research Report 1959-RIO, June, 1959

National Manpower Council, Womanpower, New York, Columbia University Press, 1957

Newburn, H. K. *Faculty Personnel Policies In State Universities*, Missoula: Montana State University, October, 1959

Office of Statistical Information and Research of the American Council on Education, *A Fact Book on Higher Education*

Stice, Glen; Mollenkopf, William G.; and Torgerson, Warren S., *Background Factors and College-Going Plans Among High Aptitude Public High School Seniors*, Educational Testing Service, August, 1956

Terman, Lewis, M. and Oden, Melita H., *The Gifted Group at Mid-Life*, Thirty-Five Years' Follow-up of the Superior Child

Thistlewaite, Donald L., *Social Factors and the Development of Intellectual Talent*, National Merit Scholarship Corporation, Mimeographed

Thistlewaite, Donald L., "The Conservation of Intellectual Talent," *Science*, 128:3328:822-826, October 10, 1958

U. S. Department of Health, Education, and Welfare, Office of Education, *Earned Degrees Conferred by Higher Educational Institutions, 1957-58*

U. S. Department of Health, Education, and Welfare, *Preliminary Statistics of State School Systems, 1957-58*

U. S. Department of Health, Education, and Welfare, Office of Education, *Progress of Public Education in the United States of America, 1958-59*

U. S. Department of Health, Education, and Welfare, *Statistics of State School Systems, 1955-56*

U. S. Department of Health, Education, and Welfare, *Statistics of State School Systems: 1949-50*

U. S. Department of Labor, Women's Bureau, *First Jobs of College Women*, Report of Women Graduates, Class of 1957; Bulletin, No. 268, 1959

Section III

PRELIMINARY INTERVIEW STUDY OF WOMEN FACULTY MEMBERS

Comments: The following report describes the goals, procedure, and limitations of the preliminary interviews with women faculty members, scheduled during the fall of 1959. It is here presented (as written by the interviewer, Dr. Cornelia McCune) not as a report of statistically significant findings, but rather as a summary of "clues" and "leads" suggestive for further studies.

I. Purpose and Plan of the Interview Study

At the beginning of the fall quarter, 1959, the Project Staff began to plan the questionnaires which would be sent to women faculty members and to department chairmen and college administrators. The questionnaires were to be designed to explore the nature of the faculty woman's job, the relevant conditions of her employment, and a comparison of her status and attitudes with those of her male colleagues. Early in this planning process, it became apparent that considerable help might be obtained from a group of women faculty members themselves, that the answers they might give to a series of open-ended questions would be fruitful in yielding suggestions of areas needing study, or hypotheses to be tested in the major investigation to follow.

We decided to seek this help through a series of interviews. We felt that a group of busy faculty women would be more willing to "talk" their answers to a series of unstructured, open-ended questions than to write them, since the talking would be less time-consuming and more pleasant than writing. The interview technique had additional advantages from our point of view: (1) it guaranteed obtaining the information promptly; and (2) it permitted the respondents to expand as much as they wished on any question of special interest to them, or to add topics and points which we might not have considered.

The group of women faculty members asked to cooperate in this preliminary study can be described as follows: They were all of the women faculty members who had received and returned the questionnaire used in an earlier study (1956) but who, at that time, had not been chosen as part of a small interview sample and who were still teaching at one of the colleges located in the Minneapolis-St. Paul area. This was an ideal group for our immediate purposes. Their location within the Twin Cities made scheduling of the interviews both conventient and economical. Their genuine interest in this type of research could be presupposed because of their having returned the previous questionnaire, and yet this same fact clearly eliminated them from the group we wanted to save for use in the new major investigation being planned for later in the year.

A careful check through the questionnaire and interview records of the 1956 study, followed by telephone calls to the colleges, yielded the names of 41 women who could be used in the preliminary study. It was decided, however, to use only four of the ten who were teaching at a Catholic women's college in order to prevent having over-representation of women who were members of a religious order and working exclusively with women students. Later, four members were lost from the group because of our inability to arrange appointments with them in the time available.* The following tabulation shows the distribution by type of institution, teaching field, and academic rank of the 31 women who were interviewed.

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* If the project had continued, the interviewer would have made two trips out-of-town in January in order to include in the preliminary study some women teaching in a Junior college and a State college.

Type of Institution and Academic Rank

Public University.		20
(3 Professors, 7 Associate Professors, 9 Assistant Professors, 1 Instructor)		
Agriculture, Forestry, and Home Economics	5	
Arts and Sciences	6	
Education	2	
Medical School	4	
Two-Year General College	3	
Private Liberal Arts Colleges.		11
(5 Professors, 2 Associate Professors, 4 Assistant Professors)		
Total Interviewed		31

Teaching Field

Art	1
Biology	1
Business	3
English and Literature	3
Home Economics	3
Home Economics Education	2
Modern Languages	2
Nursing	2
Pharmacology	1
Philosophy	1
Physical Education	3
Psychology	1
Public Health	1
Religion	1
Social Studies Education	1
Social Work	3
Sociology	1
Speech and Dramatics	1
Total Interviewed	31

Letters were sent to all of the women whom we hoped to interview, describing the total project and explaining the need for faculty assistance as a source of ideas in the planning of the new questionnaires. The interviewer then called each one and arranged an appointment. Interviews averaged an hour in length and without exception were pronounced interesting and enjoyable by all who participated.

A basic principle in planning the content of these interviews was to supplement, rather than to duplicate or verify the types of information obtained in the 1956 Minnesota study of college faculty members. Many of the questions called for comparisons between men and women faculty members; others dealt with certain special aspects of the job of a woman college teacher, or the "way of life" associated with that job; still other questions were aimed more directly at opinions about the supply of and demand for women college teachers.

The general procedure within each interview was as follows: Each of the ten main questions in the schedule was asked in order. After each question, the interviewer recorded, as nearly verbatim as possible, the "free response" of the interviewee. Then, for all questions except the first (a general one), additional follow-up or probing questions were asked and the replies recorded.

A departure from the original plan was made in connection with the second question, which related to how the person happened to be in college teaching. This question, the only one duplicating anything in the 1956 questionnaire project, was included in the hope that the more careful probing possible in the interview might uncover a more detailed and precise picture of the various influences and motivations which had led these women faculty members into college teaching. Within the first two interviews it became obvious, however, that if really searching questions were asked on this topic, so much time would be consumed that it would not be possible to cover the other questions in the schedule within one hour's time — and one hour was the maximum we felt we had a right to ask (often the maximum that could be allotted to the interview by a group of very busy people). The question was retained, therefore, only in its very general form, but responses to it were so extremely various that it has been impossible to summarize them. Interview time was devoted primarily to questions three through ten, questions which we felt would be most likely to yield new ideas and hypotheses for the new project soon to be undertaken, providing information different from that obtained in the earlier study completed in 1956. The rest of this report is concerned chiefly with these questions, repeated and numbered in the summary for convenience of reading. The main question carries a number, and the related probing questions carry the same number with a letter-subscript.

II. Tabulation and Summary of the Data

Almost none of the questions evoked answers which could be quantified. Tabulation proceeded, therefore, by attempting to categorize the responses and then make a simple count of the number of replies given in each category. Often the answers given were so wide-ranging and various as to very nearly defy categorization. Often, also, one person would give several answers or respond to a question with a "list" of things, so that a count of all the different replies to a question can add up to a total larger than the number of persons interviewed.

In the discussion which follows, rather than proceed through the questions in numerical order, it will be most meaningful to rearrange them and consider them in two groupings. Questions 3, 4, 5, 6, 8, and 9 dealt with the woman faculty member's job, her comparisons between the status of men and women on the staff, and her comparisons between college teaching and other types of careers for women. This group of questions will be discussed first.

First Group of Questions

Question No. 3 - "What aspects of the job of the woman faculty member should be studied with some care?"

The first completely free and unstructured responses to this question are perhaps as interesting and valuable as any obtained in the study. Five of the 31 women interviewed could think of nothing to say until they had been "prodded" by the more specific questions which followed immediately. The remaining 26 women listed a total of 65 "things" which they would like to see investigated. Most frequent (42 of the 65) were suggestions involving some kind of comparison between men and women faculty members: their numbers on the staff, how they spent their time, responsibilities assigned to them, their rate of advancement, their status on the staff, attitudes of administrators and students toward them, the quality of their work, the adequacy of their training. Other suggestions were scattered among various aspects of the faculty women's job without specifically calling for a comparison between men and women. Only four of these "free" responses expressed any curiosity about the relation between a woman's marital status and her position as a college teacher.

Question No. 3a - "What are the special satisfactions of the job?"

The 31 women interviewed expressed a total of 85 "satisfactions" in the job of college teaching. Most frequently expressed (32 of the 85)* were satisfactions derived from working with the kinds of young people who attend college. Next most frequently (21 times), these women listed satisfactions of "the intellectual life," a chance to work with one's favorite subject matter, to deal with ideas, to be in "an intellectually stimulating" environment. In third place (mentioned 19 times) were pleasures and gratifications associated with the kinds of people one worked with on the staff or in the community; or the prestige and status one enjoyed as a college teacher. Finally (listed 13 times) were satisfactions associated with favorable working conditions, especially the flexibility and freedom possible in determining one's own working hours and the fact that the job gives opportunity for a variety of activities and so never becomes routine or boring.

Question No. 3b - "What are some of the frustrations and difficulties of the job?"

Eight of the 31 women felt that there were no major frustrations or difficulties inherent in college teaching (at least no more than in any job) and so they chose not to specify the minor ones. The remaining 23 women listed 53 kinds of dissatisfactions — somewhat more difficult to summarize than the satisfactions, because there were so many that were named by just one person, and these "one-time-occurring" frustrations were so diverse and various. One category of frustrations (mentioned 18 times) can be described as "too much to do," "too heavy a work load;" another (listed 11 times) can be loosely described as monetary dissatisfactions — not always stated as "too low a salary" but sometimes appearing as "not sufficient clerical help" or "not enough money for equipment" or "not enough salary prestige in the community." Dissatisfaction with the college's policy for promotions was expressed only four times; and a feeling that the status or salary of women on the staff was inferior to that of men was voluntarily here listed only four times as a major frustration. Other dissatisfactions were so various and so infrequently named that they cannot be grouped for tallying. They range from a statement made five times, "Teaching itself is frustrating because the results are hard to see," to responses such as "Classes are too big," "It's hard to live up to the high status the public holds the college teacher in," or "I'd really prefer to teach a different kind of student."

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* Note that the units of tabulation here are not people but ideas expressed. These 32 statements of satisfactions derived from working with students, for example, do not represent one statement made by each of the 31 women with an extra one unaccounted for. They (the 32 statements) do include more than one such reply from some women and none from others. This same notation applies throughout the remainder of this report whenever a tally or count of ideas, statements or replies is given.

> Question No. 3c - "Do women on your college staff have as much (1) prestige, (2) belongingness (3) privileges, (4) responsibilites as the men on the staff?"

In response to each of the four specific questions stated above, approximately one-third of the women interviewed felt that there were no differences between the men and the women. Several others wanted to qualify their answers by saying that there were no differences in these respects within their own departments, but that in other departments or in the college as a whole, they understood that the women fared less well than the men. One-third of the group stated flatly that women had less prestige than men on college faculties; but no more than five would say that the men had an advantage in "belongingness." Only three generalized that men came out ahead in terms of privileges; and just seven stated that men were given more responsibilities in the on-going affairs of the college than were women. The rest of the group made a wide variety of qualified or specific comments rather than a summary generalization; but the "sense" of these specifics is overwhelming on the side of describing men as in a more favorable position than women on college faculties. The tone of these comments was not so much blaming the administration for discriminatory practices or complaining about unfair treatment of women as attempting to explain the differential status of men and women.

Question No. 4 - "What needs to be studied in relation to college teaching as a "way of life" for women?"

Again, as with the preceding general question, it was hoped that the free and unstructured response to this question would provide some interesting suggestions of things to include in the major project planned for the months ahead.

There were five women who could not formulate any answer. From the rest, the interviewer obtained a total of 55 suggestions.

Many raised questions about the relationship between a college teaching job and a woman's private or personal life. Most numerous were those phrased in terms of time and scheduling: "Do the extra-curricular demands of the job prevent her from have adequate recreation?" "Is the job so demanding it leaves no time for relaxation?" "Does the college make any provision for the social life and recreation of its women staff members?" There were seven additional queries about whether women college teachers could have a private life off-campus. Several of the questions (16 of them) concerned the extent to which women college teachers played a role (and if so, what kind) in the off-campus community; and 11 more thought it would be worthwhile to check into the home life and responsibilities (including possible conflicts in interest and time) for both the married and the unmarried women.

Question No. 4a - "How does the "way of life" (i.e. the off-job life) of the woman college teacher compare with that of women in other jobs?"

This was the first of two follow-up questions designed to call for more specific and channelized answers than had been obtained from Question No. 4.

Eight women felt that no categorical differences could be found, that it was "an individual matter," that the college teacher, like any other working woman could make of her life what she chose.

There were 33 replies, however, which stated some kind of an important difference between the two groups, and these may be arbitrarily sorted into three categories as follows: Those favorable to college teaching, of which there were 12, illustrated by comments such as these: "College teaching is more creative and stimulating;" "College teaching jobs permit greater flexibility in planning and arranging one's own time than do other jobs;" "College teaching has that wonderful long summer vacation to do with as you please." Comments unfavorable to the college teaching job as a way of life numbered 13 and included these: "College teaching is a more demanding and all-pervasive job, so you can never leave it behind you or stop thinking about it;" "The college teaching job takes more time, runs into evenings and weekends;" "College teaching has that hazardous three months without pay in the summer." Another group of seven comments highlighted some important differences between the life of college teachers and that lived by women on other jobs but did not indicate which was preferable — saying only, in effect, that college teachers are likely to have as their extra-curricular interests and activities more intellectual, more sedentary, and more job-related types of things. Four women felt that college teachers participated in community and civic affairs more than did other women workers; two felt that college teachers participated less than other employed women; and three wondered which group played the most active role in community affairs.

Question No. 4a - (continued) "How does the "way of life" of the woman college teacher compare with that of the married woman who is not employed outside of her home?"

Six women gave no answer to this question; five more felt that there was no categorical answer possible, since there would be such a wide range of individual differences within each group. The remaining 20 women gave 24 suggestions. One person felt that college teachers had more free time for doing what they wanted to do; three people thought the homemakers had more time to call their own; two people thought that the only difference was that homemakers could be free during daytime hours for recreation and socializing. Nine women pointed out that college teachers have more intellectually stimulating lives than do homemakers who frequently become bored with their jobs; five people noted that college teachers, at least the single ones, miss the joys of intimate family relationships, but that at least some college teachers achieve a sort of vicarious parental satisfaction from their work with students.

Question No. 4b -- "How does the college teaching job foster (or frustrate) other aspects of life, such as: (1) friendships, (2) hobbies, (3) recreation, (4) home life, (5) family relationships?"

Three women found it impossible to answer the question about the job's effect on friendships; six felt that it depends entirely upon the individual. The remaining 22 gave 34 answers distributed as follows: There were 15 responses to the effect that the college teaching job fosters the formation of rewarding friendships, makes it easy to meet interesting, like-minded people on and off campus. About a dozen of the responses indicated that a college teaching job cut down on the time available for friends or made it more difficult to meet and be friends with off-campus people; and several made a point of the fact that it was especially difficult for the unmarried woman faculty member to meet men on any basis other than professional, or conversely, that the nature of their very time-consuming jobs in an almost exclusively male department made it very difficult for them to meet and form friendships with other women teachers. Two people pointed out that the married woman might face a special problem with friendships if her husband "didn't fit in" with her college colleagues, or if she had to maintain relationships and obligations with two sets of friends, her husband's and her own.

Hobbies and recreation, these women seemed to believe were pretty generally frustrated rather than fostered by the college teaching job — mostly because the excessive time demands of the job left none for fun. Half a dozen women, however, noted that this might be true of any job; and four or five stated that while one's hobbies and recreation were sadly frustrated during the academic year, one could "more than make up for it" during the summers. Two others pointed out that the college teaching job created an especially acute problem because it acquainted people with and stimulated their interest in such a wealth of potentially fascinating and absorbing types of leisure time activities that it was doubly frustrating not to have time for them. There were two or three who stated that the married women who teach in college had even less time than the unmarried for recreation and hobbies "unless you can call homemaking a hobby."

As for how the college teaching job affects home life, six were unable to answer; the remaining 25 gave 32 responses. At least a dozen women pointed out that the unmarried college teacher can (and often does) work out a very happy home life with parents, siblings, other women colleagues, or alone, and that for many women, married and single, work around the home can and does constitute one's "hobby." For the married woman, it was pointed out by five persons that the time-consuming nature of the job and the frequent necessity for "taking work home" interfered with housekeeping; on the other hand, three women noted that, much more than in other types of jobs, it was possible to arrange one's working hours around the demands of homemaking and so it was actually easier to carry the double responsibility.

The special question about the effect of a college teaching job on family relationships was not answered by more than half of the group. (Perhaps the interviewer "pushed" less for an answer to this question having just come through the preceding related questions.) The little bit that was obtained is scattered. Five of the responses dealt with the single woman and were somewhat irrelevant to the question asked — they merely pointed out that some single women have heavy family responsibilities and that others have no satisfactory family relationships because of geographic distances separating them from their relatives. Several women noted that the demanding nature of the college job often resulted in the neglect of other members of the family, and that this could be bad if there were children. No one, apparently, could think of an instance of the reverse, where homemaking responsibilities and even child rearing had interfered with the college job. There seemed to be a general feeling that the married woman would not take on a college teaching job unless she felt she could handle it. Finally, there were three women who made the special point that the married woman in college teaching would face willingly insoluble problems of conflict between home and job responsibilities if her husband did not approve of her working.

> Question No. 5 - "Among the various groups of people with whom you work, which group have you particularly enjoyed? Which have you liked the least? Conversely, how do you think these various groups look upon faculty women (in comparison to faculty men)?"

The first two parts of this question were apparently very difficult to answer because nobody gave a freely volunteered and unstructured response to either part. When the interviewer pushed gently by reading off a list of groups (male and female students, under classmen and advanced students, male and female colleagues, administrators, board members, parents of students, non-academic personnel on campus, members of off-campus community groups), it was still almost impossible for our respondents to name any group which they disliked. Most of them agreed that they had had practically no experience with members of the college board or with the parents of their students. The most common answers to the first question were "I like them all" or "Differences in my feelings relate to individuals within these groups, not to the groups as such." When urged to *try* to rate the groups in order of preference, those who could be persuaded to make the ranking tended either to put students first and colleagues second or vice versa. For sub-groups among the students most of those interviewed refused to make a choice, though there were a few who expressed preferences for upper division students rather than freshmen and sophomores. Those who had taught both men and women students enjoyed both. Some preferred their male colleagues to the female ones, some felt the opposite way, most were unable (or perhaps unwilling) to make a choice. A few specific dislikes showed up, such as: "I don't like mobs and crowds of people of any kind;" "I don't enjoy people I can know only casually;" "I don't like the unmotivated students who *have* to take my classes." There were many expressions of a positive sort such as these: "I enjoy community contacts especially;" "There are good relationships here between the academic and non-academic staff;" "There's an occasional clash of personalities, but mostly we're good friends;" -- "We're lucky to have such wonderful young people to work with."

The third part of Question No. 5 tried to get those interviewed to say how they thought various groups with whom they worked looked upon faculty women. With respect to student opinions, a very frequent answer from one-third to one-half of those interviewed was "I don't know; I never thought about it." Of those who were willing to attempt an answer, many seemed to feel that men students usually, but often the women too, preferred men teachers, or thought they did (until they had tried a woman). Many others felt that students tended to choose and like (or dislike) their college teachers on an individual rather than a sex linked basis, and that what counted favorably with students was "being a good teacher," "having a fine reputation in one's field," or "being especially helpful to students." Some respondents pointed out that freshmen might be more likely to prefer men (as a change from high school, or in accordance with stereotyped expectations) and that male foreign students definitely preferred men as instructors, especially in graduate classes.

There seems to be no doubt that women faculty members as a group feel that their male colleagues' reactions to them are mostly negative. There was no woman interviewed who failed to answer this part of the question. Only five said that their male colleagues "treated women as their equals" and enjoyed the mixed staff, and two of these five were Sisters at the Catholic women's college where men constituted a small minority of the teaching staff. Six other responses attributed to the men a sort of grudging toleration of the women, a willingness to have a _few_ women on the staff as long as they never were advanced to positions of authority, a chivalrous attempt to respect the women though not really considering them equal to men. Five additional responses were rather noncommital, saying that the men resisted the hiring of women but treated them all right once they were hired, or insisting that "in our department all are treated alike, but I hear that in other departments the women really have a bad time." All the rest of the answers (more than 25 of them) revealed the women's conviction that the male members of the faculty actually disliked the women, looked down on them, ignored them, were baffled and puzzled by them, resented them, actually ridiculed them, or, at the very least, preferred male colleagues because they couldn't "feel comfortable" with the women. One wonders if the men themselves would have revealed the attitudes attributed to them by the women.

Overwhelmingly the women interviewed felt that women faculty members like each other and get along well together, except for an occasional individual.

Administrators were seen as certainly seeming to prefer men, because they hire so few women, although some of them were credited with giving at least lip service to a policy to non-discrimination. There were eleven respondents who emphasized that while women were hired in small numbers, those who were on the staff were treated fairly and given privileges and responsibilities the same as those afforded the men.

Except for one women who knew that the Board of Trustees at her college had opposed the appointment of a woman to the Board itself, nobody knew or wanted to hazard a guess about how Board members felt about women on the faculty.

Very few of those interviewed had any idea of what the parents of college students felt about anything. Four respondents were willing to guess that parents would be quite impartial; four felt that parents might prefer, or at least expect, their offspring to have male teachers in college.

There was much more variability in the replies about what the off-campus community thinks of women college teachers. Eight women were undecided or didn't answer. Nineteen of the replies reflected a belief that the community accepted women college teachers very well. Comments such as these are representative: "They look on us favorably and with respect;" "They call on us to answer questions or give 'short courses' in the community;" "I get along very well with the community groups with whom I work." Fourteen replies were more negative. Typical of this pessimistic opinion of how the community views the woman college teacher are these statements: "They have a higher regard for men teachers, call on them more often for consultation and speeches;" "They look at us with a mixture of awe, fear, and resentment and feel ill-at-ease with us;" "The public is more discomfitted by a highly educated woman than by a man of equal education."

> Question No. 6 - "On what basis are faculty members in your department rewarded and advanced? Is it the same or different in other departments of your college? Are there any sex differences in promotional policy? What system would you prefer?"

It is interesting, but regrettable, that for five women the "free" response to the first part of this question was "I don't know; I wish I did!" When asked to rate in order of importance several factors which might play a role in promotional policy, "research and scholarly study" received more first place rankings than any other factor, with "publications" and "teaching competence" running close together for second place. "Other kinds of service to students" was far down on the list; but "participation in professional organizations," "committee service within the college," and "community service" were all believed to be important within the woman's own department. There were a few who believed that many things counted and were taken into consideration; and there were a few who pointed out that possession of the Ph.D. was a sine qua non for advancement beyond the rank of assistant professor. Those for whom the application of this rule meant perpetual continuance in the lower ranks were about equally divided as to attitudes, half of them having reached a state of resignation to the inevitable, the other half feeling bitter and resentful.

Most of the women interviewed felt that their own departments were not out of line, that approximately the same policies were applied throughout the college. Most of them also felt that the same general procedures and policies of promotion were used with both men and women. There were, however, a few scattered comments to the effect that men seemed to go up faster than women, maybe because they were more aggressive about seeking promotion, maybe because they really deserved it more than did the women. Others noted that when budgets were limited, the married men were given preferential consideration for salary increases.

When asked whether or not they would like to see the promotion policies changed, approximately one-third of the group said that the system in effect was as good as it could be, although far from perfect. More than a third of these women specifically stated that more weight should be given to teaching competence, although a few who felt this way admitted that it was so difficult to evaluate teaching that administrators probably had to turn to other criteria of merit. Eight of the responses indicated some dissatisfaction with the traditional and prevalent emphasis on research and publication, pointing out that it was hard to make oneself do a good job of teaching when all the rewards went to other things, or that some emphasis on research was probably desirable (for the sake of the status and prestige of the department) but that it should not be so great as to interfere with what faculty members were hired to do -- teach!" Several women were disturbed by the success of "individual bargaining for advancement" or by the impersonality with which the whole thing was handled. A few urged specific changes, such as giving more weight to years of service, or developing differential policies to fit different people and circumstances. They would like to see each person hired for a special kind of work (teaching or research or service to the community) and each person rewarded for successful achievement in the kind of thing he was hired to do and could do best.

Question No. 8 - "Compare the professional life of the married and single women faculty members."

A small number (five women) said they knew so few married women college teachers that they could not make the comparison. Nineteen of 51 responses indicated essentially no difference between the two groups in regard to how well they handled their professional jobs. Statements like the following two illustrate this attitude: "It's an individual matter, and wide variation exists in both groups in terms of willingness to do the extras;" "Married women wouldn't be hired unless they had proved they could handle both jobs." Another large number of responses (about 20) reflected a belief that the married women did very well on the major features of their jobs (their teaching assignments) but that they spent less time than did the single women on the "extras," such as student organizations and activities, departmental social obligations, and off-campus professional activities. Another ten replies, however, pointed out that in some ways the college gained by having the services of married women. The following four statements are representative of this position: "Married women stay put better since they are not as free to accept jobs elsewhere or go off on extended leaves;" "Married women are happier and therefore more productive;" "Married women are more helpful and understanding as counselors for students;" "Many single women are just as absorbed in hobbies or off-campus community affairs, or in housekeeping for elderly parents, as the married women are in their homes and families.

Question No. 9 - "Would you choose a college teaching career again? 9a - "If not, why not?" 9b - "If not, what instead?"

From the "free" response to this question, it is apparent that nearly all of the women interviewed are well satisfied with their careers. Eighteen said, "Yes," and of these, nine were emphatic about it. Nine more said, "Yes, but I liked what I was doing before, too." Only four confessed to having originally hoped to do something else or to being willing now, to change to something else. High school teaching, business, and medicine were the competitors. Interestingly (and surprisingly?) there was only one who admitted that she would have preferred marriage.

Question No. 9c - "Would you have liked to have had a kind of educational preparation for your job different from what you did have?"

A little over one-third of the group (13) were quite satisfied with the training they had received and could suggest no improvements. The rest made a variety of suggestions, 27 in all. There were four who wished they had completed the work for their Ph.D.'s; four wished they had had more general or liberal arts background; three regretted not having had more training in statistics and research design; three would like to have had more work in some field other than their majors; three would like to have had some teacher training or study in educational administration. Two admitted that they might have enjoyed another field just as much as the one they were in; and two felt the need, now, to take refresher courses in order to keep up to date. Five wished they had had more money when doing their graduate work so as to have been able to attend several different institutions or so that they could have concentrated on the graduate study without having had to earn a living concurrently.

Question No. 9d - "What changes would you like to have had in your previous job experiences?"

Four women did not answer this question. Most of the rest had had some kind of work experience preceding their college teaching jobs and were extremely appreciative of the values of that experience as background for their present jobs. For nine women, the previous jobs had been in secondary school teaching; eleven had had practical experience in their own special teaching fields (business, nursing, social work, medical technology, dramatics); eight had had a variety of work experiences, not necessarily related to their present jobs, but which they felt had been invaluable to them just because of the variety represented. And three additional women were particularly grateful for having had opportunities for travel and study abroad. There were three who felt keenly the lack of any work experience prior to their college teaching.

Question No. 9e - "What could really tempt you to leave college teaching right now?"

For most of the women interviewed, leaving college teaching now seemed to be unthinkable. Seven answered flatly, "Nothing!" An additional nine qualified their answers slightly by comments such as these: "Nothing, at my age; maybe if I were younger I might consider a change;" "I have had opportunities which I resisted in the past." Only three said, "Nothing except marriage." There were four who said they might like to switch to the teaching of some other field, except that it would be impractical. Only five were seriously considering a change or felt that they could be tempted into something else. Of these five, two would like to return to high school teaching; one would like to "just paint" if she could earn a living at it; one was seriously considering an executive and administrative position with a national professional organization; and one had nothing in particular in view but felt that she would be "open-minded" about any kind of attractive and challenging opportunity.

Second Group of Questions

The second group of questions (Numbers 1, 7, and 10) dealt with opinions about the supply of and demands for women college teachers and with ideas about the recruiting of women for college teaching jobs.

Question No. 1 - "How do you explain the small proportion of women on most college faculties?"

Only three of the 31 women interviewed failed to answer this question. The remaining 28 had all apparently done some previous thinking about the problem. They talked readily and volubly, and from them we obtained 83 responses. A considerable number (19) were explanations related to marriage, usually the simple straightforward statement, "Women are more interested in marriage." Two replies made a point of the fact that a demanding job like college teaching is more difficult to combine with marriage than are other types of work. Another 21 of the responses pointed to some deficiency or attribute of women themselves as the explanation — women don't go on for graduate work, don't have as much professional drive as men do, aren't prepared in the right disciplines, are afraid they wouldn't be good enough, or feel they can earn as much or more in other fields with less expenditure of time, effort, and money in the preparation. Two replies suggested that maybe the women already in college teaching were not very attractive examples for young girls looking ahead. Seven of the replies emphasized that the attitudes and mores of society itself do not encourage young women to look forward to or prepare for professional careers involving graduate education. However, most frequent of all (35 of the replies) was the belief that women were not really welcome on college faculties. Sample statements are these: "College administrators prefer men;" "Men's chances for advancement are better than women's;" "By tradition and custom, college teaching is thought of as a man's field;" "Women are not paid or treated as well as men of equal training and ability;" "College students are more highly stimulated by men teachers."

Question No. 7 - "What special qualifications do you think a woman needs to be hired instead of a man if their educational and experience qualifications are the same?"

As a preliminary to this question, another one was inserted, after the first few interviews had been completed. It was: "Which do you think would get the job in your college if a man and a woman of equal training, experience, and ability applied for the same job?

There was no one who thought the woman would naturally get it; nine were sure the man would; the rest felt that the decision might depend on special circumstances of the moment, such as the whim of the department chairman, or an opportune but temporary feeling that it was timely to add a women to the staff.

If we return now to the original phrasing of Question No. 7, we note first that the most frequent single response (it occurred 18 times) was that the woman would have to have an unusually attractive, pleasant, stable personality, one that the men would like. Several of those who gave this reply noted ironically, that such sterling and paragon qualities of personality would rarely be sought (and never insisted on) in a man. Many of the responses indicated that the woman would have to have some special attribute the man didn't possess or greatly surpass him in some special way: "She must be more intelligent than the man;" "She must be better known, have higher prestige in the field;" "She must have a special interest in and devotion to the college and its objectives;" "She must have 'pull' in the right places." A couple of replies pointed out that the woman might land the job "by accepting less salary than would be offered to a man," and two others noted that "the woman has to be superior to the man to land the job, but she has to act, after she gets the job, as if she were inferior." Another response was expressed this way, "A highly accepted department that doesn't need to worry about its prestige on the campus can afford to hire some women now and then; but more usually a department, especially a new one 'on the make,' will feel it needs the greater prestige and aggressiveness and the louder voice of the man."

Question No. 10 - "What problems do you see in recruiting more women to college faculties?"

A tabulation of the "free", unstructured responses to this question revealed only two women who could think of nothing to say. The other 29 gave 53 replies. Most frequently listed was the competition of marriage and homemaking (15 responses). Next most frequent were replies (12 of them) pointing out that common beliefs about administrative prejudice against women discouraged many women from trying for college jobs; special factors like anti-nepotism rules prevented the hiring of some otherwise qualified women; and the lack of appropriate "refresher courses" made unavailable some older women who might otherwise return to jobs they had left earlier to raise their families. Ten women saw the root of the problem in the fact that nothing was done with young girls to stimulate and encourage them to look ahead and prepare for the long and arduous graduate training necessary for the job; and an additional seven stated that financial assistance for women graduate students was not plentiful enough. Nine women pointed out that there were many non-academic jobs and high school teaching jobs which paid better salaries to women than did college teaching, and furthermore, these jobs could be obtained with just an M.A. or even just a B.A. degree.

Question No. 10a - "How important is it to try to recruit more women into college teaching?"

More than two-thirds of the group (24 women) felt that we should recruit more women into college teaching; but seven noted that we need college teachers so desperately that we should recruit both men and women, and take all who are qualified for the job; and four made the special reservation that although women are needed in college jobs, they should not be recruited for these positions in higher education at the expense of lower levels of the school system or non-academic fields where the need is also great. Three women were even more cautious, feeling that it might actually be wrong to try to recruit women for an occupation in which there may be no place for them because of administrative prejudices against women. Only one person suggested making some effort to hire married women on a part-time basis; and only one person stated that an important reason for wanting to increase the number of women on college faculties was the increasing number of women students attending college.

Question No. 10b - "What methods do you think might work in interesting more women in college teaching?"

Various techniques were suggested, but few were offered with any great confidence in their efficacy. Three people thought the attitudes of society in general needed changing in order to sell the idea of women in college teaching — and for this we should use all the media of mass communication. Eight of the suggestions emphasized the importance of starting with the high school population, identifying the very able and telling them about the possibilities of college teaching as a career for women so that they could make the long-range plans necessary to prepare for it. At least one respondent, however, pointed out that girls of high school age are most particularly unlikely to react favorably toward any occupational field that requires such high scholarship and so many years of training as does college teaching. Some 34 of the suggestions were directed toward undergraduate women students, including such specifics as these (the first suggested 13 times, the second nine times, and the third mentioned twice): "Identify the capable ones and talk to them individually, encouraging them to prepare for graduate school;" "Set good examples for undergraduate women in the form of attractive, well-adjusted, successful women college teachers and demonstrate a lack of prejudice against women on the staff;" "Hire promising undergraduate women as part-time research assistants to work with women faculty members and give them an interesting taste of what women staff members do." In addition, there were eight women who felt that the most effective technique would be to increase financial assistance to women graduate students; and five more suggested refresher courses for the older, married (or widowed) women to enable them to come back into college teaching after their children had grown. Five thought that the total supply of qualified women college teachers could be increased if it could be shown that college teaching can combine with marriage; but only two recommended part-time employment of married women as a solution to the teacher shortage problem; and one person specifically warned against this policy on the grounds that a department suffers by trying to use too many part-time people who never completely identify themselves with the department and are not available for the many "extras" which have to be done to keep things running smoothly.

III. A Few Concluding Remarks

The foregoing summary of replies to the preliminary questionnaire must be regarded, of course, as merely suggestive. The fact that only 31 women were interviewed and the further fact that they were not so chosen as to constitute a representative sample of women college teachers, makes it manifestly impossible to assume that their responses are an accurate reflection of all the feelings, ideas, and conditions of employment for women college teachers in general.

It does seem apparent, however, that the study achieved the purpose for which it was intended. The very diversity which made the responses so difficult to summarize, constitutes now a host of wide-ranging suggestions of topics to be studied more carefully and of content for questionnaire items.

One general topic which must surely be included in a larger and more careful study is the comparative status of men and women faculty members. Interview questions aimed directly at the exploration of this factor yielded diverse but interesting replies. In addition, many of this small group, in their "free responses," volunteered opinions and feelings about the matter, or suggested comparison needing further study. The interviewer herself was somewhat surprised to find that almost universally these women college teachers believed that their male colleagues looked upon them with something less than cordiality. This suggests a real need for obtaining from the men themselves their reactions toward women members of the staff. There is a similar need for checking on the true opinions (and practices) of college administrators in relation to women faculty members.

In spite of the frequency with which these 31 women compare their own faculty status unfavorably with that of men, they seem much more often than not to have simply "stated the facts" as they saw them, without rancor or bitterness. Certainly they seem, as a group, to be well pleased with their jobs. They site many more satisfactions than frustrations in their work and almost to a woman they would choose this same career if the "had it to do over again." There is a suggestion for further study here. When many more women are questioned, can the interrelationships among many variables that lead to job satisfaction be determined?

And what about the married women who are teaching? It did not seem feasible to tabulate separately the replies made by the one-third of our small groups who were married. In a larger study this should be done, not only to compare the married women with the single in terms of specific relationships between their college teaching and their homemaking, but also to compare their attitudes, efficacy, and status generally.

The three questions dealing with the supply and demand of women college teachers yielded several rather trite but also some novel and interesting suggestions about possible recruiting methods. There is repeated emphasis, however, on the importance of societal attitudes, of deep-seated feminine attitudes and expectations, of family patterns of thinking and planning for girls, all of which need careful study in relation to the problem of career choice for women.

Distribution of Faculty Women Interviewed in Preliminary Study

Institution	Department	Number at Each Rank
U. of M. - SLA	Art	One Associate Professor
"	Social Work	One Professor, one Assistant Professor, one Instructor
"	Philosophy	One Associate Professor
"	Personal Orientation	One Assistant Professor
U. of M. - Gen. Coll.	Retailing	One Assistant Professor
"	Literature	Two Assistant Professors
U. of M. - Education	Physical Ed.	One Assistant Professor
"	Curr. & Inst.	One Associate Professor
U. of M. - Ag., For, and Home Econ.	Home Econ. Ed.	One Professor, one Assistant Professor
"	Home Econ.	Three Associate Professors
U. of M. - Medical Sciences	Pharmacology	One Assistant Professor
"	Public Health	One Professor
"	Nursing	Two Assistant Professors
Private Liberal Arts Coll.	Physical Ed.	One Associate Professor, One Assistant Professor
"	Bus. and Sec. Training	Two Assistant Professors
"	Biology	One Assistant Professor
"	Modern Language	One Professor
"	Speech and Dramatics	One Professor
"	Religion	One Associate Professor
Catholic Womens College*	German	One Professor
"	English	One Professor (Acad. Dean)
"	Sociology	One Professor (Dean of Students)

* All three are members of a religious order

Section IV

THE PH.D. FOLLOW-UP STUDY
(Progress Report)

Comments: Before the time when it became clear that the total project could not be completed, some initial work was undertaken in relation to the follow-up of persons holding the Ph.D. degree. Mr. Bradley Sagen's progress report on the work in this area of the project is presented in this section.

I. Introduction

The purpose of this section of the report is: (1) to summarize the progress made on Phase 3b[1], pages 6 and 7, of the USOE Study of Present and Prospective Women Faculty Members; (2) to discuss some of the problems involved in the present study in an effort to help those who may be considering a somewhat similar study in the future; and (3) to speculate on admittedly incomplete data in an effort to clarify some of the questions related to the place of women in higher education, providing some possible hypotheses for further research in this and related areas.

The purpose of the Ph.D. Follow-up Study is perhaps the best described in the appropriate section[1], pages 6 and 7, of the original application for funds submitted to the USOE.

> Follow-up studies of Minnesota Ph.D.'s are planned including a second follow-up of the 1,315 Ph.D.'s investigated by Mitzel and Keller almost a decade ago, to find out what job shifts have occurred in the interim and why, particularly in the case of women, these changes were made. An initial inquiry, limited probably to a single page, would be addressed to the 1,315 persons in the Mitzel-Keller study, more than 90 per cent of whom returned the extensive questionnaires used in that study, and to the entire list of persons who have received Ph.D.'s since 1949. Responses should show how many of those serving on college faculties at the time of the Mitzel-Keller study (approximately 62 per cent) were still so employed, and at what ranks and in what fields, and what per cent had since migrated in or out of this field, and for what reasons. Extensive information collected earlier regarding these individual's activities and appraisals of college teaching as a career choice would help to describe the kinds of people who shifted in or our of college teaching under the mounting man-power pressures

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[1] Application To The Commissioner of Education, U.S. Department of Health, Education, and Welfare, For Funds To Support Research Under The Provisions of Public Law 531, 83rd Congress, Submitted by: College of Education, University of Minnesota on April 14, 1959. Initiated by Dr. Ruth E. Eckert, Professor of Higher Education. Transmitted by: Walter W. Cook, Dean, College of Education, University of Minnesota. Title: A Study of the Job Motivations, Activities, and Satisfactions of Present and Prospective Women College Faculty Members.

> of the past decade. A more detailed questionnaire would then be sent to the women involved, to find out how those who had remained in college teaching or had entered it recently now view this choice, and why the others had decided against it. Though the cases would be derived from a single institution, these former Minnesota Ph.D.'s represent all subject fields and are serving in colleges and universities throughout the world, and an analysis of their post-Ph.D. records should yield many useful clues regarding trends in faculty employment and career satisfactions.

Before sending out a second questionnaire to those who had participated in the earlier study and to a similar group of Ph.D.'s who had received their degrees during the 50's, it was decided to re-analyze the data from the original study to see if any sex differences existed. There were several reasons for performing this preliminary analysis. The first was to provide data which could be compared with those from a group holding more recent degrees. The second reason was that it was thought that the original data might be used to develop leads for new questions and areas of inquiry in a second study. Related to this is the fact that the original study provided a "test run" for later work. By carefully analyzing the original procedures past mistakes could be avoided and maximum benefits gained from future inquiries of the same type.

The earlier Keller-Mitzel Follow-up Study of Minnesota Ph.D.'s which provided the basis for the USOE proposal and which furnished the data for the present report is described briefly in the following section.

II. The Keller-Mitzel Follow-up Study of Minnesota Ph.D.'s

A. Purpose

The study had two main goals. One, to determine the technical and professional needs of the graduate alumni of the University of Minnesota which could be used in the evaluation of proposed changes in the graduate programs. The second purpose was to evaluate the worth of the present program for preparing college teachers at the University. These studies had originally been conceived by different groups, but were combined under the direction of the Bureau of Institutional Research of the University of Minnesota. The study was headed by Dr. Robert J. Keller, Director of the Bureau, and assisted by Harold E. Mitzel.

B. The Sample

The sample consisted of all Ph.D. graduates of the University of Minnesota who had received their degree between July 1, 1935 and June 30, 1949, a 14 year period. The records indicated that 1,315 people had received the Ph.D. during this period and the data available from the graduate school was obtained for all of these graduates.

Questionnaires were sent to the 1,315 and 95 per cent were thought to have been contacted in the original or one of the three follow-up inquiries. One thousand one-hundred and thirty-nine, or 91 per cent of those contacted returned completed questionnaires. Those who returned the questionnaires were compared with those who did not reply, on selected items known in advance for the two groups. One type of bias was detected. Students who had earned their B. A. in a foreign university responded to a significantly less degree than did other graduates. Most of these students were foreign nationals who had returned to their home country.

C. Results

No complete analysis of the results has been published to date, although many of the results have been mimeographed for local distribution. A chapter by Keller and Mitzel[2] (pp. 157-168) contains a description of the study and some of the results and their implications.

III. Procedures

There were three sets of information from the original study. The first of these was contained in the data from the graduate school records. Of the 1,315 records, 1,103 contained enough information to be of some use in the present study. The second set contained the information from the returned questionnaires. Of the 1,139 questionnaires, 1,117 were usable.

The third set of information contained the replies to a special section of the questionnaire of those who had been, or were now engaged in college teaching. Six hundred and ninety-seven of the questionnaires were usable.

Each of the sets of data was categorized into those who were teaching in a college or university at the time they received the questionnaire, and those who were not. Each of these categories was further analyzed by sex. Table 1 describes the resultant groupings on the following page.

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[2] Mitzel, Harold E., and Keller, Robert J. "A Follow-up Study of Minnesota Ph.D.'s: Their General Characteristics." Eckert, Ruth E., and Keller, Robert J., A University Looks at Its Program, (Chapter 18), University of Minnesota Press, Minneapolis, Minnesota, 1954.

Table 1

RESPONSES TO QUESTIONNAIRES

Group		Set of Information		
		Graduate Record	Questionnaire	Questionnaire* to College Teachers
Non-college teachers (Ph.D., but not employed in Higher Ed.)	Men	402	389	82
	Women	37	26**	1
Sub-Total		439	415	83
College teachers	Men	587	618	541
	Women	77	84	73
Sub-Total		664	702	614
TOTAL		1,103	1,117	697

* Since the Questionnaire to College Teachers was sent to all those who had taught in college at one time, the non-college category is composed of those respondents who had taught in college, but who had shifted to some other occupation.

** Women who did not list their present employment were excluded from the questionnaire returns. Therefore, all full-time housewives were excluded.

Two types of comparisons were made in the present recheck of the Keller-Mitzel data. The first was between women and men teaching in a college or university. The second comparison was between women who were teaching in a college or university and women who were not doing so at the time of the study. (This comparison was not made on the data contained in the Questionnaire to College Teachers, since there was only one woman who had been teaching in college and had left the field.)

Limitations of the "Keller-Mitzel Study" for Present Purposes

The original study was designed primarily as a descriptive study and analysis of sex differences was not included as one of the primary purposes of the study. The questions used were not constructed to gather the types of data which would be useful in making comparisons by sex, nor were many of the questions constructed, or the answers coded in a manner conducive to a test of significance.

The number of women who were teaching in college (N=77) and those who were not (N=37) were so small that fairly large differences would be required to attain significance.

Also, the fact that the study was carried out in 1949 and includes data on graduates who received their Ph.D. as far back as 1935 should not be ignored.

Therefore, the present report cannot be conceived as the result of a truly scientific investigation. The reader would be doing the project staff and educational research an injustice to regard this report as anything more than speculative in nature.

IV. Results

A. Undergraduate Preparation

College women did not significantly differ from college men or non-college women in the type of control, enrollment, accreditation, or location of their undergraduate institution.

B. Graduate Work

Master's Degree. The college women again did not differ from the two comparative groups in the enrollment, accreditation, or location of the institution where they received their master's degree.

However, 25 per cent of the college women contrasted with 7 per cent of the college men[*] received the master's degree from a private institution.

Graduate Major. College women tended to concentrate in the group of majors known as the "education" group, which included psychology and philosophy (38 per cent), This differed significantly from the college men, (16 per cent), but surprisingly not from the non-college women (46 per cent).

Cost of Graduate Education. The cost of their graduate education did not differentiate between the three groups. For those who received their degree in 1949 the estimated cost was $6,000, (median).

Financing of Advanced Degree. Campus employment and personal savings were the sources of income most frequently used by all three groups. Three categories were used to some extent by more of the college men than by college women: off campus part-time employment, (25 per cent college men vs. 8 per cent college women); income of spouse (21 per cent college men vs. 7 per cent college women); and veteran's benefits, (10 per cent college men and no college women).

Age at Degree. College women were significantly older at the time they received their degree than were either the college men or the non-college women. The median age for the college women was 36 years and for the other two groups, 32 years.

Attitude Toward Graduate School Experiences. Of a total of 22 graduate school experiences, only two differentiated between the men and women college teachers in their usefulness to the present job. The ability to do research or produce artistic creations was essential or valuable to 30 per cent of the college men, compared with 17 per cent of the college women. Likewise 53 per cent of the college men found the ability to supervise a research program essential or valuable. This was true for only 25 per cent of the women in college teaching.

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[*] All differences reported were significant at the .05 level.

Only one comparison with the non-college women was significant. The knowledge of public affairs was essential or valuable for 75 per cent of the college women contrasted with 46 per cent of the non-college.

When the respondents were asked if the graduate school experience had been the main contributor to the development of a particular ability, only one comparison was significant. The ability to do research or produce artistic creations was acquired mainly in graduate school by 75 per cent of the college women vs. 46 per cent of the non-college.

Attitude Toward Controversial Issues in Graduate Education. Of the six major issues listed, only one differentiated between the sexes in the nature of the reply. The introduction of foundation courses in broad fields other than the graduate major to round out the doctoral program was agreed to tentatively by 68 per cent of the college women vs. 43 per cent of the college men.

Plans for College Teaching at the Time of Entrance to Graduate School. At the time of entrance to graduate school, 50 per cent of the college women had definitely decided to enter college teaching; 15 per cent of the non-college women had made the same decision. Conversely 57 per cent of the non-college women had decided that the field of college teaching was not for them; 13 per cent of the college women had indicated the same initial decision. The rest of both groups had either made no decision, or had qualified their answers to some extent.

C. Previous Employment

The college women were not particularly mobile as shown by their employment record. Of this group, 52 per cent were still holding the same job that they had obtained upon receiving their degree. This was true of only 18 per cent of the non-college women. There were no differences in the type of job placement facilities used to secure a position after receiving the degree.

Present Position

Type of Employment. The non-college women were employed in several different fields. Thirty-five per cent were in "private practice", 23 per cent employed by the Federal government, 19 per cent in business and industry, 12 per cent employed in research by industry or by private research organizations, and 11 per cent were employed in the public schools at the non-college level.

Type of Institution (college teachers only). There were no differences between the college men and women in the geographic location, accreditation, legal control, or enrollment of the employing institution. However, 77 per cent of the men were employed in an institution that offered the Ph.D. as the highest degree while this was true for only 57 per cent of the women.

Per cent Time Spent in Various Activities. Outside of the fact that the non-college women did not teach (except for the public school teachers), there were no differences in the per cent of the time spent in research, administration or individual case work.

Rank and salary. There were no differences between the college men and women in academic rank. However, the college women received significantly less pay than did both the college men and the non-college women. The median salary for the college women was $4,675, for the non-college women $4,855, and for the college men $6,167. However, it should be remembered that many of the college teachers may have been on nine-month appointments.

Length of Time in Present Position. There were no differences between the men and the women in the length of time in the present position.

Job Satisfaction. There were no differences between college women and the two comparative groups in level of job satisfaction.

D. Professional Activities Since Receiving Degree.

College women did not differ significantly from the two comparative groups in the per cent who had published their thesis as a whole or in part; the per cent who had published books, monographs or articles in professional or popular journals, or who had done editorial work; or the per cent who had done creative work of a different nature, such as painting.

No differences were found in the proportion who had received honors since receiving their degree, or who had held offices in professional societies. There were also no differences in the number of societies joined by the various groups.

The college men had continued research in their major field to a greater extent than had the college women (85 vs. 66 per cent). However, there were no differences found in the per cent who had done research in some field other than the one in which they had received their degree.

E. Factors Related to College Teaching

Preparation for College Teaching. Men and women now teaching in college showed the same attitudes toward the questions of which skills and abilities are desirable for college teachers, and which of these skills and abilities should be acquired in graduate school. They also listed the same sorts of problems encountered in college teaching which they believed could have been overcome by proper instruction at the graduate level.

Per Cent Time Spent on Various Activities. The men and women spent approximately the same percentage of time in different types of activities related to the college environment (teaching, research, administration, off-campus activities).

V. Discussion

For the most part the results can be summed up with the phrase, "no significant differences were found." However, some of the results should help in the planning of further investigations.

One of the major findings was the difference in salary of about $1,500 between men and women who were teaching in college at the time of the investigation. Since there were no significant differences in rank and length of service, nor in the criteria commonly used in evaluating research productivity (number of publications, etc.), it might be concluded that there is discrimination against women in the field of college teaching. However, several of the other findings tend to temper this interpretation. Significantly more of the men were teaching in institutions which offered the Ph.D. as the highest earned degree. Also more of the women were concentrated in the areas related to education.

One interpretation might be that the men were employed primarily in universities with more opportunity for summer teaching and consultant work whereas a number of women may have been working in the state teachers colleges.

The preceding discussion does not diminish the possibility of discrimination; it merely indicates that the present data do not control some of the possibly relevant variables. Why the sexes were employed in different types of institutions is also a possibility for investigation.

Another significant area relates to the research activities of men and women. More of the men were employed in institutions which offered a Ph.D. and presumably placed more emphasis on research. Therefore, it was not surprising to find that more of the men found the ability to do and to supervise research studies essential to their present job. Neither was it surprising to find that more of the men had continued research in their major field.

The question which an investigation of sex differences must answer is why this occurred. Was it because of differences in interest and other characteristics, or was there discrimination against women in the awarding of research jobs? The evidence is hardly conclusive. One hypothesis might be that women may be more generally oriented toward teaching than toward research.

Women may enter college teaching rather than high school teaching because of interest in teaching a particular subject and level of student, but this need not imply that they are as strongly interested in research as are many of the men in college teaching. If it were found to be true, as some have contended, that women are more likely to be given the job of teaching the beginning classes, and men the advanced classes and the research positions, this may be due to differences in interest or to discrimination or to both, depending on the individual and institution. However, any scholar teacher should be engaged in some form of research, and the failure of many women, and of many men, to continue research should be investigated.

The reason for the difference of four years in age at degree between the women college teachers and (1) the men college teachers and (2) non-college women is not clear from the data available and should be studied. Did these women have other vocational experiences, such as public school teaching, which caused them to enter graduate school at a more advanced age than that of the comparative groups, or was their progress through graduate school slowed for some reason? If younger women were recruited into graduate school, would they become more like the non-college women, tending not to enter college teaching? If so, why?

The most important findings of this study are not the significant differences found, but rather, the lack of them. Although women do not engage in research as much as men, they make contributions in other professional areas on the same level as the opposite sex. Publication, membership and election to office in professional organizations, all indications of worthwhile activity, fail to discriminate between the sexes. The reason for the relative lack of research on the part of the women should be investigated, but their other contributions should not be ignored.

One argument that has been used by those opposed to the hiring of women as college teachers has been that they tend to leave the field for marriage or other reasons. Of the present sample, only one per cent of the women were college teachers at one time and had left the field, as compared with 13 per cent of the men. (Significant at the .01 level.)

The question of the desirability of recruiting more women into college teaching still remains, but this study certainly does nothing to discredit those already in the profession. If women can be found who value and seek this kind of life, then there seems to be no reason to withhold the opportunity because they are of a particular sex. America needs qualified college teachers, and qualification should be the only criterion for admission to the profession and for advancement.

Recommendations

The present review suggests several possibilities which might prove useful in studying women in college teaching:

1. Studies of sex discrimination in areas such as rank and level of pay can be considered valid only if certain relevant variables such as type of institution, salary scale of institutions, etc. are controlled. This does not deny that the fact that women tend to work in certain types of institutions may in itself be important.

2. Studies are needed which probe with some depth into the abilities, interest, and level of aspiration of men and women who go into college teaching. It may be that women are more teaching-oriented than men and that their aspiration is to teach rather than to do advanced research.

3. The comparison of high ability women who went into college teaching with high ability women who did not may prove more useful than studies of sex differences. (It should be noted that the number of women in the present study who did not go into college teaching is too small to provide a firm test of the hypotheses.)

4. There are many women who have less than the Ph.D., but who are excellent college teachers. A subsequent follow-up should perhaps include those who received the M.A. degree as well as those who received the Ph.D.

5. Studies such as the Keller-Mitzel Study have served a useful purpose. What is most needed now seems to be studies which follow up the leads of these earlier studies with more depth and precision.

Section V

DOCTORAL STUDIES RELATED TO THE PROJECT

Comments: Presently underway are three theses, to be presented toward the Ph.D. requirements of the Graduate School, University of Minnesota, which are related to the initially planned project. Although they are tangential to the main project, they were designed originally to include some specific materials leading toward answers to certain questions of the larger research. After the cancellation of the project, the designs for the three theses were changed somewhat; but they still will result in important conclusions relative to college teachers. The impetus for these three studies gained from the initial work on the main project has been notable. Brief summaries of the designs are here presented.

A. Study being conducted by Helen D. Berwald, Carleton College, Northfield, Minnesota, on THE EMPLOYMENT AND ADVANCEMENT OF WOMEN FACULTY IN INSTITUTIONS OF HIGHER EDUCATION ACCREDITED BY THE NORTH CENTRAL ASSOCIATION.

The present study is an exploratory one designed to obtain information regarding the attitudes of administrators, faculty members and students toward women as college teachers, and the way in which these attitudes are reflected in the employment and advancement policies of institutions of higher education accredited by the North Central Association.

Evidence is being sought regarding the extent to which opportunities in college teaching are limited for women due to an apparent preference for men in the area. The study will also attempt to present information supporting or refuting certain reasons commonly given for such preferences, such as: (a) degree of mobility, (b) personality as perceived by students, male and female colleagues, and administrators, (c) teaching effectiveness as perceived by students, male and female colleagues, and administrators, (d) the production of research and other scholarly writing, and (e) the importance of contributions to the community and profession as perceived by colleagues and administrators. Comparisons between "opinion" and reality will be made on several of these factors. Another phase of the study will consider the degree of relationship between the students' attitudes toward college teaching as a career and those held by the faculty and administrative officers in their particular institutions.

Data are being gathered through the use of three questionnaires, one designed for college administrators and departmental chairmen, another for men and women faculty members, and a third for senior students. These have been sent to the Deans of all institutions accredited by the North Central Association (with the exception of those which are junior colleges, technical institutes, or non-coeducational institutions), and to random samples of departmental chairmen, faculty members, and senior students in each of thirty institutions selected as a random, stratified sample according to size and type of institution.

B. Study being conducted by Bradley Sagen, College of Education, University of Minnesota, on THE RELATIONSHIP OF CERTAIN PERSONALITY AND ENVIRONMENTAL VARIABLES TO THE SATISFACTION WITH PRESENT POSITION OF FACULTY MEMBERS IN LIBERAL ARTS COLLEGES.

Recruitment of college faculty members is now the subject of considerable discussion. With the current and likely continuing shortage of qualified instructors, it seems almost certain that the colleges will abandon the practice of self selection on the part of the individual and will engage in considerable recruitment in order to maintain and enlarge their faculties.

Assuming that a faculty member's satisfaction with his position influences his actions, it would seem desirable for an institution initially to select faculty members likely to achieve a level of satisfaction leading to actions helpful to the attainment of that particular institution's goals. Similarly, certain other factors being somewhat equal, the prospective college teacher will wish to choose the college which will provide a desired level of satisfaction.

Previous research has demonstrated that there is no one description which will fit all college teachers. "The" college teacher does not exist. The same is true of institutions of higher education. Even within categories, such as the liberal arts college, there is much diversity.

Using the terminology developed by Murray, this study proposes to determine the extent to which relationships exist between faculty satisfaction with present position and (1) the level of certain personality needs of faculty members, and (2) the level of congruence between the needs of the individual and the corresponding press for the institution.

The sample will be drawn from faculty members at the eight private coeducational liberal arts colleges in Minnesota. Eleven personality needs will be measured, using the Activities Index developed by G. G. Stern. Eleven corresponding press variables will be measured, using the College Characteristics Index developed by Stern and C. R. Pace. The level of job satisfaction will be determined through the use of a modification of the Hoppock Job Satisfaction Blank, with scores weighted by the method of reciprocal averages.

C. Study being conducted by Miss Edith Stedman, Student Activities Bureau, Office of the Dean of Students, University of Minnesota, on SEX STEREOTYPING OF SELF, CHOSEN OCCUPATION AND OTHER OCCUPATION (COLLEGE TEACHING) AND THE RELATIONSHIP BETWEEN THE DEGREE OF FEMININITY AND OTHER VARIABLES.

Although college teaching might appear to be an attractive profession for women, few women attempt entry directly. Doubtless there are many reasons, including nepotism regulations, length of graduate study required, earlier age of first marriage, and attitudes and self-concepts. This study will explore one area — the dimension of femininity as it is applied to self, chosen occupation, and other occupation (college teaching) among able women students at the University of Minnesota.

Femininity is believed to be a major dimension of personality, and, hypothesized here, an important factor in occupational choice. As measured by psychological tests, it is the total of item responses given more often by women than by men. There are indications that the operational definition of femininity can be further amplified by defining femininity scores in terms of other variables, such as socio-economic status, demographic data, and age of self among siblings. This study, then, will attempt to amplify our definition of femininity as a dimension of personality, as well as investigating the relationship between degree of femininity and perception and choice of occupation.

The first hypothesis is built on Bordin's theory of occupational choice: "...emerging patterns of interests vary with the degree to which the subject accepts an occupational stereotype as self-descriptive and with knowledge of the true occupational stereotype."

Hypothesis 1: There will be greater congruence between the degree of femininity of self-description and chosen occupation than between self and other occupation (college teaching).

The second hypothesis is derived from Deutsch's "feminine core" concept, which infers that those activities and occupations related to the traditional nurturant role of women are most natural for the woman who has fully accepted her femininity.

Hypothesis 2: Women who describe themselves as more feminine will be more likely to select the traditional women's fields, the humanities or the arts.

Corollary 1: These women will also reflect more acceptance of the traditional feminine role in other aspects -- little interest in a career, little interest in graduate study, earlier plans for marriage.

The third hypothesis comes from Komarovsky's speculation that occupations demanding a high degree of abstract conceptualization, manipulation of abstract symbols, or logical and experimental (rather than intuitive) approach are defined as masculine.

> Hypothesis 3: The more feminine women will describe college teaching as more masculine than their chosen occupation. The less feminine women will describe college teaching as either more or less feminine than their chosen occupation.

The proposed population is honor students in this year's sophomore class of the College of Science, Literature, and the Arts, totalling 270 (147 women and 123 men). Although the study is concerned with the occupational selection of able women, it is felt that data on men are necessary for comparison purposes.

The Berdie Femininity Checklist (an adaptation of the Gough checklist, including adjectives found significant in differentiating between men and women) will be used to obtain a measure of femininity. The list will be scored three times, once for self, once for chosen occupation, and once for college teaching (or second choice occupation if college teaching is the chosen occupation). Information concerning family background and personal factors also will be gathered.

A total femininity score will be obtained for each subject on each of the three checklists for comparisons relative to the first hypothesis. For testing the second hypothesis, the subjects' chosen occupations will be categorized as masculine, neuter, or feminine (according to Labor Bureau records of the number of each sex in these occupations), and the categories of the students'selected occupations will then be compared with femininity scores. After rank-ordering of the subjects by femininity scores of self-description, the high and low quartiles will be compared on their sex-stereotyping of college teaching, for testing the third hypothesis.

Certain other data being collected will not be included in this study, but will be analyzed later. They include marital status, plans for marriage, and attitudes toward careers for women, other factors important in the selection of a certain occupation; and the complete Gough checklist as a basis of examining more thoroughly the stereotyping of college teaching.

Pilot study: In a pilot study of thirteen very able women students, primarily for the purpose of establishing whether femininity was related to scores on the American Council of Education Psychological Examination or to college grades, the three major hypotheses were tentatively supported. Additional information on interest in college teaching was collected in this pilot study. Although no statistical significance can be ascribed to the results, the following provocative indications emerged:

(1) Attraction to College Teaching

None of these high ability women planned to become college teachers, although several were interested in learning more about the field. Of the thirteen, only four stated that their advisers had discussed the possibility of college teaching as a career for them, and only three stated that a counselor had mentioned it. Almost all had discussed the question with their peers or had observed their professors' duties and academic life.

(2) Personal Needs Met by College Teaching as an Occupation

A series of items built on Schaffer's need theory was included both for student's chosen occupation and for college teaching. The students believed that college teaching offers opportunity for satisfying the following needs: Mastery and Achievement, Dominance-Influence, Recognition-Approbation, and Social Service.

There was almost complete unanimity in believing that college teaching does not offer socio-economic status commensurate with the training required. On the other Schaffer needs, there was difference of perception, with the low-femininity subjects stating that Independence and Agreement with Moral Principles as a need-area were not met in college teaching, while the high-femininity subjects stated the converse.

In an open-ended question asking for the least and most attractive aspects of college teaching, agreement on attractive aspects was repeated; but except for salary, perceptions of unattractive aspects differed. Three low-femininity subjects perceived college teachers as closely supervised, subject to a civil-service atmosphere, and unable to have personal privacy.

(3) Stereotype of the College Teacher

The adjectives checked by the students as descriptive of their college teachers described a generally favorable stereotype. These able women liked and respected their professors. A difference again emerged, however, when the high-femininity and the low-femininity groups were compared, the high group using more complimentary terms than did the low group. The total group saw college teachers as less feminine than either self or chosen occupation.

Section VI

SUMMARY COMMENTS

In describing the work accomplished in the initial stages of the main project, all of the individuals preparing the preceding sections of the report have tried to emphasize possible trends revealed, clues leading toward answers to be sought in further research, and directions which might be followed as studies relative to the sub-topics of the project are pursued. The principal aims of the project, of course, remain largely unmet; and it is vital that all areas of the initially proposed study be investigated. They are of such central importance at this critical stage of higher education that we should no longer proceed on assumptions alone, without seeking facts basic to sound planning and policy. Each area may be studied from various slants and approaches; each contains phases of the central problem which may be amenable to research through separate or coordinated studies.

The final recommendation of this report, therefore, is that various interested agencies be urged to support sound research relating to the objectives of our uncompleted project. Involved, clearly, are studies of the psychological motivation and career planning of able students, as well as further investigations of the selection and recruitment of college teachers and their rewards. Only an investigator of the first order, with broad interests in higher education (such as the initiator of our project), might be expected to plan and undertake coordinated research on the several phases originally included. Many investigators with special interests in particular aspects of the project, however, might design studies on selected sub-topics of the general problem, with results leading toward needed answers and action. Necessary funds should be made available.

We recommend, therefore, that the United States Office of Education continue to support studies on college faculty supply, with particular reference to the role of able women in college teaching; and that other agencies, also, be encouraged to provide support for the several phases of research involved in studying the critical central problem.